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Integrated Mother-Child Health-Nutrition-Family Planning Services Delivery Models in India

Prepared for the workshop of the State Level officers on the Delivery of Health Serivices at the Integrated Child Development Services Workshop, 4-6th June, 1976, Bombay organised under the auspicis of Grant Medical College, Bombay and Department of Social Welfare, Government of India, New Delhi. Edited by Dr. P. M. Shah, Director, ICDS Workshop and Professor of Paediatrics, Institute of Child Health, Grant Medical College and J. J. Group of Hospitals, Bombay.

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INTEGRATED MOTHER-CHILD HEALTH-NUTRITION-FAMILY PLANNING SERVICES DELIVERY MODELS IN INDIA.

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COMMUNITY HEALTH CELL
326, V Main, I Block
Koramangala
Bangalore-560034
India

Prepared for the workshop of the State Level Officers on the Delivery of Health Services at the Integrated Child Development Services Works, 4-6th June, 1976, Bombay organised under the auspicis of Grant Medical College, Bombay and Department of Social Welfare, Government of India, New Delhi. Edited by Dr. P. M. Shah Director, ICDS Workshop and Professor of Paediatrics, Grant Medical College and J.J.Group of Hospitals, Bombay.

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COMMUNITY HEALTH CELL
326, V Main, I Block
Koramangala
Bangalore-560034
India

C O N T E N T S.

I. Comprehensive Rural Health Project, Jamkhed.

II. Domiciliary Treatment of Protein Calorie Malnutrition.

III. Indo - Dutch Project for Child Welfare.

IV. Integrated Nutritional and Health Programme in Urban Chawls, Bombay.

V. Nutrition Rehabilitation Centre Apex Training Institute(ANP) and Village Child Care Centres.

VI. Rural Health Project, North Alibag, Taluka.

VII. The Kasa Model Integrated Mother-Child Health-Nutrition Project.

I N T R O D U C T I O N.

It is quite some time since attempts have been made to study the health-nutritional delivery system at the grass-roots level in our country. Some of the projects have organised such programmes in wider areas five-to-six years ago. It is a pity that these operational models are known more internationally than nationally.

The services to be carried out through the Integrated Child Development Services (ICDS) are similar to those already provided at these projects. Many of these projects have accomplished much more with less man-power and finance than those provided in the ICDS projects.

It is worthwhile for those involved in the ICDS projects to go through these case-studies, project-outlines, accomplishments and difficulties faced by these projects.

An attempt has been made to compile and edite the reports of six rural and one urban projects. In the monograph those projects have been incorporated according to the alphabetical order. I am certain that the Directors of the projects will be only too glad to provide further information.

I am grateful to the project directors and to the authors of these reports for providing the information within a short period of notice for this workshop.

Bombay
3rd June, 1976.

Dr. P. M. Shah,
The ICDS Workshop Director and
Professor of Paediatrics,
Institute of Child Health,
Grant Medical College and J.J.
Group of Hospitals, Bombay.

I

COMPREHENSIVE RURAL HEALTH PROJECT, JAMKHED

(PROJECT DIRECTOR: Dr. R.S. AROLE
ASSOCIATE DIRECTOR: Dr. Mrs.M.AROLE)

This Comprehensive Rural Health Project, designed by Drs. R.S. AROLE and Mrs. M. AROLE to serve and to meet the basic health needs of the rural population of 40,000 and is related mainly to the local resources of the area.

The project was initiated late in 1970, located in Jamkhed village in Ahmednagar district some 400 km. South East of Bombay. It is an agricultural area with scarce resource and poor irrigation, having suffered three consecutive years of drought.

The project works in close co-operation with the local Government Health Services system. The 30 villages that are covered by the project are away from the primary health centre of the Government service. Four of the villages have Government sub-centres with auxiliary nurse-midwives, centre for family planning and medical and surgical procedures beyond the scope of the Government sub-centre.

OBJECTIVES OF THE PROJECT:

The main objective is to meet the basic health needs of the population by providing the following services:

1. MCH
   (a) Ante-natal Care, Perinatal Care, Delivery, Infant and Child welfare, Family Planning activities.
   (b) Immunization of children and mothers. (Small pox, Diphtheria, Whooping Cough, Tetanus, Polio, BCG).
   (c) Prevention, detection and correction of malnutrition.
   (d) Educate and stimulate community to meet own nutritional needs.

2. Health education in community.

3. Diagnosis and treatment of simple common illnesses.
4. Medical and Surgical emergencies.
5. Detection, prevention and control of chronic illnesses - Tb and leprosy.
6. Prevention and treatment of blindness.
7. Environmental health through the provision of safe drinking water.

An effective referral system for all the above activities is offered by the Centre in Jamkhed.

In order to meet the objectives quickly and cheaply, the following approaches have been adopted:

1. Extensive community particupation
2. Development of a training programme and utilization of village health workers.
3. Development of agriculture for the nutrition programme.
4. Providion of safe drinking water by the sinking of deep tube wells with hand pumps in the most needy villages.
5. Organization of clinics at peak periods determined by activities hf the community and not at the usual regular working hours.
6. Health Education is an important component of the project. The health education is given with the help of audio-visual aids such as flannel graphs, flash cards, puppet shows and film strips.

The community helped in selecting people with histrionic talent for this purpose. A mobile educational exhibit has beeb developed and it is taken from village to village and with the help of puppet shows, mass health education is given. This is followed up by the village health workers talking to smaller groups.

The health education is directed towards creating an awareness of the various health problems and their solutions.

THE MAIN CHARACTERISTICS OF THE PROJECT AREA:

The 40,000 population, of which 10% is Muslim and 90% Hindu (14% Harijans), occupied 480 sq.miles in 30 villages. All villages are accessible by road, but 25% of the people remain inaccessible during the 3 month rainy season. Several access roads have been constructed by

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the villagers through voluntary communal labour in order to facilitate transportation of the health team. Unemployment is a major problem and is particularly serious during the non-farming season. As in rural India, the problems encountered in the delivery of health care in this area, are numerous. Economic factors contribute to a large extent to village people not seeking medical aid early. Poor communications make travel difficult and expensive. Renting an on-cart for transporting the sick, foregoing daily wages to attend the outpatient department for common illnesses, is economically difficult to an average villager. Several studies have shown that an average patient going to the Primary Health Centre, lives within a radius of 5 miles of the health centre.

Population data: Sample survey in 5 villages - 1974

0 - 11 months = 5% - 2,000

1 yr - 5 Yrs = 10% - 6,400

Women in child bearing age (15 - 45 yrs) = 18% - 7,200

Infant Mortality Rate (1971) - Baseline survey = 110/1,000

In the field of adult literacy, classes are being run in the village by the local government through the use of volunteers on a regular basis.

Other basic problems in this area before the project was initiated were inadequate health facilities and lack of trained personnel to render even minimal health services in the villages.

Health Problems:

Common health problems in this area were identified by studying the records of the Primary health centre, rural hospital statistics, Government census and the survey by the team. Some of them could be summarized as follows before the project was started:

1. Simple repetitive pattern of preventable disease giving rise to morbidity and mortality, especially in children under the age of 5 years for example, were diarrhoea, fevers, mal/nutrition, anaemia and childhood diseases. A baseline survey indicate that inflant mortality ranged from 80 per 1,000 live births in Jamkhed to 180 per 1,000 live births in remote areas, such as Sakat.

2. The survey done by the team in a rural area showed that less than

1/2 percent of expectant mothers received any tupe of professional care during pregnancy, delivery and lactation, resulting in a high degree of morbidity in this group.

3. The high birth rate leads to maternal depletion, poor health of children and to other adverse effects on the family and on the community.

4. The prevalence of tuberculosis, leprosy and other chronic diseases was so high that it affected the social and economic conditions of the population in the area.

5. Lack of trained personnel.

6. Inadequate facilities for medical care.

7. Poor communi ations between villages and health facilities where help is available.

8. The basic underlying rural poverty which enhances most of these problems like inadequate and unhealthy water supply, malnutrition, poor housing and so on.

PROJECT ADMINISTRATION:

The project has a Governing body composed of the chairman, secretary, treasurer and four additional members. The two doctors are ex-officio members of the board. By constitution, the members of the governing body should be a representative of national voluntary health organization and one should be represntative of the nursing profession. The WHO Regional Advisor from SEARO is also a member of the Governing body. The functions of the governing body are to review and approve the annual budget, appoint a project director and approve the general policies of the roject. The Governing Body has given the Director full authority to appoint a staff, fix salaries and adopt rules and regulations for the functioning of the project.

There is a Advisory Committee which is composed of local leaders and care is taken to see that various groups in the community - political parties and caste, are represented. The block development officer (a government official) is an ex-office member of the advisory committee. Their function is to act as true representatives of the community. There is within this group a working body which meets once every two or three months and a general body which meets once or twice a year.

Structure:

A three tier system of responsibility has been developed through the use of two health teams. The first line of contact with the community is the village health worker, selected by the community itself.

This ensures effective communication with the villagers. Living in the village herself, she is aware of the problems and helps to find out target groups in the project's priorities, gives health education and first aid to the people and fuctions with the team in house to house surveys. In-service training is given to these village health workerw and in addition they are given two days per week training in the main centre at Jamkjed. They receive an honorarium of one Rupee per day.

THe second tier consists lf the nurse supervisor, medical social worker, auxiliary nurse midwife and leprosy and laboratory technicians. They are responsible for supervision of the village health worker. They visit each village once a week, carry out hose visits to detect malnutrition, communicable diseases (leprosy and tuberculosis), expectant and lactating mothers and eligible couples for family planning. Appropriate promotional health talks (using audio-visual aids including movies) and programmes like immunization, are arranged together as a team and each member has a specific role in the delivery of health care. The teaching emphasises the project priorities. Ayurdevic and homeophatic medical practitioners are functioning independently in the area, and most of them co-operate actively in the project, and two ayurvedic doctors have been integrated into the project health teams.

The third tier consists of the two doctors whose main functions are administration, supervision, training and the day to day running of the main centre at Jamkhed, which is the only medical facility in the area, and the thirty villages of the project.

Of particular importance to the success of the project in providing comprehensive services is the firm decision of the two staff physicians to allocate their time on the basis of 30% for curative services, 30% for public health services, 20% for supervision, 10% for training and 10% for self-education.

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The following objectives were adopted:

1. Reduce with rate from 40 per 1,000 to 30 per 1,000 in 6 years.
2. Reduce the mortality rate of the under fives by 50%
3. Identify and bring under regular treatment patients with tuberculosis and leprosy.
4. Provide basic primary health care.
5. Organize training of auxiliary staff.

In order to achieve full coverage at low cost, in meeting basic health needs, the project introduced, as mentioned in the beginning, the following programmes:

1. Young Farmers Clubs for community Development and for meeting the felt needs of the community.

Very soon it was realized that health is dependent on other basic necessities of life which were repeatedly expressed as the felt needs of the people - water, food and economic development being uppermost.

Therefore it was decided to start other community development programmes specially with reference to health. Young Farmers Clubs have been established. These are mainly involved in developing and improving agriculture, sanitation and other group projects.

In order to get the nutrition programmes - the clubs identified and cultivated fallow lands, some set apart land and grow protein rich foods. This has resulted in over 400 acres being cultivated for the nutrition programmes in the project. 5,000 children get a daily breakfast from the food thus locally grown.

In order to improve water supply the clubs have organised building of small check-dams for water conservation. Irrigation wells are being built downstream. Good seed, fertiliser and equipment such as spray pumps are available to poor farmers on a co-operative basis. Pumpsets, tractors and bullocks are also available to those marginal farmers needing these services.

2. Safe drinking water has been provided in each of the villages by providing deep tube wells. Maintenance of these tube wells is the responsibility of the village and services are readily available through the project. All the tube wells are in working order.

3. Rehabilitation of leprosy, tuberculosis, blind patients along with other deprived members of society such as widows etc. by starting goat co-operatives, and co-operatives with Young Famers Clubs. In this way the nutrition component of the health care programme has been met.
4. Training and use of village health workers.
5. Community participation and involvement in decision making and support in the delivery of comprehensive health care.
6. Incorporation of indigenous practitioners and Ayurvedic practitioners and dais in the project.
7. Co-operation with all local Government Programmes.

USE OF VILLAGE WORKERS:

The comprehensive Rural Health Project is aiming to find a method of delivery of health care bewt suited to the needs and resources (financial and manpower) of the rural area.

The rural economy is such that it cannot support the services of a physician in every village or group of villages, neither are qualified physicians readily available in rural area. Taking this into account the project's method of delivery of health care is to delegate responsibility to Health Personnel below the level of physician.

Delegation of every task to the humblest member of the team capable of doing it satisfactorily is one of the ways of overcoming the problem of inadequate manpower of financial resources.

The third level in this system, as mentioned, is the village level worker, who is a member of the community and comes in close contact with her peers, and therefore acts as the liaison between the community and the more educated nurse or paramedical worker.

A cultural gap was found to exist betwenn the city-educated health worker and the illiterate rural folk. Very often it was found that a patient after listening to the advice of a physcian or nurse would take and follow the advice of the illiterate watchman or sweeper of the health centre, rather than that of the physician. This is because he identifies himself with another illiterate person and feels closer to him rather than to the educated sophisticated nurse.Taking this attitude

into consideration it is felt that the best way to get into the community and teach them to accept new methods and change their attitudes was to enlist the help of women from within the community.

In one instance, it was found that a city-educated nurse staying in a village for several months could not convince a single woman to undergo tubectomy. On the other hand, a woman(illiterate) from the same village, when convinced herself, was able to refer 75 women for tubectomy within the same period of time.

One worker has been able to convince in a relatively short period 200 women to accept antenatal care, and has referred over 100 women for tubectomy in a relatively short period. She is also able to follow-up patients with tuberculosis and leprosy and encourage them to take treatment regularly from the clinic.

The village community is asked to find women from their own community who would be interested in joining the health care team to heop in rendering health care. Usually woemen with no household responsibilities volunteer for such work.

The women come to the health centre at Jamkhed on Saturdays and Sundays. On these two days they are given regular classes on various health topics by the physicians, nurses and paramedical workers. The women are mostly illiterate and therefore most of the teaching is done with the help of flash cards and charts.

The five priorties of the project are stressed and the village level worker's role is explained to them. Each class is started with repetition of the previous week's teaching and discussion on the application of their knowledge to their work in the village.

The women are also taught the use of flash cards so that they can use them in their promotional work.

Twenty eight workers are ebing trained by this method and the experience with them appears very encouraging.

COMMUNITY PARTICIPATION:

From the onset, community participation has been a sine qua non of the project. The community in Jamkhed, with its poverty, lack of good housing facilities, lack of electricity and running water, made available

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simple accommodiation for the work and for the staff. They donated land and buildings for the work, not only in the main centre, but also in the villages. In all villages they assist on a voluntary basis in the preparation of food (i.e.cooking etc.) for children suffering from malnutrition. In addition, they contribute to the building of roads for better access of the health team workers to the villages. A young organization is collecting blood for the health centre and villages are particularly active in the mass mobilisation for immunization and in other public health activities. This community is involved not only in the implementation of the programme but also in the decision-making process. They have a strong feeling that the health centre and the whole health service system is a part of their own system and they consider all the problems as their own.

Indigenous Practitioners:

The incorporation of indigenous practitioners in the project with the facilities for referral offered to them is clearly in advantage to the community. Ayurvedic practitioners are members of the staff, and very close co-Operation is found in the villages with the local ayurvedic practitioners.

Monthly meetings of all practitioners in the area are arranged for discussing common health problems, and how best the public can be served, is aimed at. These groups organized and supported eye camps, family planning camps etc. Their aid is enlisted to carry out mass programmes such as immunisation.

The project co-operates with the local primary health centre and taluka dispensary, taking active part in carrying out and assisting in the achivement of their targets. For example the government vaccinator enlists the help of the village health worker to get the mother to vaccinate their children. A sense of co-operative effort rather than competition has been established.

STAFFING PATTERN:

All staff work is both at the centre and on the field, so that there is field experience and no person is singled out as "Field Worker", two physicians.

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1.	Ayurvedic doctors (intern)	1
2.	B SC Nurse	2
3.	Nurses full trained	3
	ANM	6
	Leprosy Paramedical workers	4
	Social workers	2
	Agricultural workers	2
	Drivers	2
	Mechanic	1
	Tractor drivers	2
	Office staff	4

Weekly staff meetings, where all programmes are discussed, help to build up the team approach. In order to increase the impact of health education all members of the staff are taught health education, so that every member of the institution will give the same message. Skills are enhanced by constant in service training.

The most difficult task was to induce nurses and paramedical workers to go to the villages and do preventive work rather than the "pill pushers" It was necessary to change attitudes towards the masses and to learn to work with local people rather than for them.

FINANCIAL STATUS:

The project in the beginning needed help to get started. But since 1974 it has become self-supporting in as far as health care is concerned. Rs. 430,000 is spent for Comprehensive health care for a 40,000 population including family planning with its incentives. Of this Rs. 80,000 is obtained from the Government and a family planning national organisation. A special grant of Rs. 36,000 is given for Leprosy patients. The rest of the money is locally raised on a fee for service basis. The care reaches all classes of society and the poor derive the benefits most.

Cost of care has been minimised by use of basic drugs, deligation of responsibilities to lesser trained people and treating the illness early so that there is less likelihood of serious expensive illness. A child with diarrhoea in the village, treated by a village health worker, may cost the institution 20-30ps. The same child, if not treated,

would have gone on to diarrhoea-dehydration, resulting in expensive hospitalization requiring highly specialized care coating - Rs. 150 - 200. By prevention of malnutrition, extensive immunisation and early treatment of illnesses a large part of common illnesses have been prevented.

Using lesser trained staff has decreased the salaries and hence a larger proportion of money is available for preventive programmes, transport and health education, in addition to life saving drugs.

Budget 1976 Rs. 4,30,000 (See page No: 11) put the figures & not diagramm.

Salary 30%

Drugs 30%

ACHIEVEMENTS.

In the five years during which the project has been working the primary objectives have been ralized.

1. Full coverage and readily available primary care
2. Approximately 50% of couples in target area are practicing family planning vasectomy, tubectomy and oral contraceptives.
3. 84 per cent of children under the age of five have been immunised with Triple, Antigen,Poliox and BCG.(99% have had small pox vaccination).
4. 78 per cent of women are on regular antenatal care.
5. Leprosy and tuberculosis patients are being constantly supervised and the drop-out rate has been minimised 82% are on regular treatment.
6. Sample surveys in1976 revealed that in the project area the birth rates had fallen to 23-24 per thousand.

Infant mortality rate has dropped to 39 per thousand Whooping-cough, diphtheria and tetanus in the preschool child have been controlled in the past three years.

In villages with supplementary feeding programme malnutrition and frank marasums has become minimal. The problem remains in the children of migrant workers, who stay in the village for six months of the year. The success of the programme may be attributed to the highly motivated village health workers and the community they serve, coupled with the team approach and response to the felt needs of the people.

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(Dr.Mrs.M.Arole)
Asso. Director.

12.3.76.

II

DOMICILIARY TREATMENT OF PROTEIN CALORIE MALNUTRITION.

(World Health Organisation, aided Project at the Health Unit Palghar f the Government of Maharashtra).

Principal Investigator:

Dr. P.M. Shah, Professor of Perdiatrics, Institute of Child Health, J.J. Group of Hospitals and Grant Medical College, Bombay.

Co - Investigator:

Dr. A.R. Junnarkar, Reader in Preventive and Social Medicine Grant Medical College, Bombay. Incharge, Rural Health Unit, Palghar.

DOMICILIARY TREATMENT OF PROTEIN CALORIE MALNUTRITION

Place of work: Rural Health Unit, Palghar, Dist: Thana.

Participating

1. Institute of Child Health, J.J.Group of Hospitals & Grant Medical College, Bombay.
2. Department of Preventive & Social Medicine, Grant Medical College, Bombay.

Date of commencement: 1st August, 1972.

Brief information Regarding the Health Unit Palghar: The Rural Health Unit, Palghar, is 87 Km. from Bombay and has seven sub-centres. The Unit caters to a service area coverage and the services extended by the Rural Health Unit are similar to those of any Primary Health Centre in the country.

The medical officer-in-charge of the Unit is a Reader in Preventtive & Social medicine, Grant Medical College, Bombay. He stays at Palghar. One Assistant Medical Officer and one Lady Medical Officer help him in conducting the services of the Unit. Besides this medical staff, there are two public Health Nurses, 12, Nurse Midwives, seven of them working at the sub-centres, one Helth Educator, three Sanitary Inspectors, one Dental Surgeon, one Laboratory Technician and one Statistical Assistant at the Health Unit. On an average, there is onemidwife for a population of 8,000 under one subcentre. However, due to the heavy load of work, she is able to look after a population of no more than

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than 5,000. In this respect too, the Rural Health Unit at Palghar is similar to any primary health centre in the country. The sub-centres are located in rented houses.

The staff pattern at the Health Unit differs from that of other primary health centres on account of the training prosummes on Medical intersm, nurses, sanitary inspector, and post-graduates in Public Health are being conducted at Palghar. It has many more persons than an average Primary Health centre would have. However, the presnt study would have the assistance of only such staff as would be available with an average primary health centre. In other words, only two nurse-midwives, one senior nurse and one doctor would be indicted into the present study. This has been purposely done because future duplicability of the work programme designed for the study is one of its objectives. Further, care would be taken to see that this limited staff puts in approximately the proportionate amount of their time which the staff of an average primary health centre would put in for a population of about 18,000 people.

These personnel provide health are to the mothers, children and adults; control communicable diseases; maintain environmental sanitation; carryout immunization and family planning programmes; collect vital statistics and give health and nutrition education. The Domiciliary visits by a nurse midwife is an important regular activity. Under the training

programme of medical intersma a professors of Pediatrics, Obstetrics and Prev.ntive and Social Medicine visit the unit every week.

The percentage of schedule castes (Harijans) and scheduled tribes together is a little more than 25 percent in the are-. The literacy rate is about 29 percent. Only four village have a population of over five thousand. All the villages have a number of jamlets, and in some places, the population is scattered in isolated huts.

Fishing and agriculture are the main occupations of some people, but the majority of the people work as labourers. Fish, eggs, milk and vegetables find a good market in Bombay, hence these highquality foods are not generally consumed by the local poor population.

THE PROBLEM:

The Mortality rate or recurrence of severe P.C.M. after discharge among children who had been nospitalized for sometime is depressingly high. The domiciliary nutrition at rehabilitation carried out through the Health Unit, Palghar during 1965-1969, showed promising results. The cases improved satisfactorily and there was no recurrence during 1 to 3 years' follows-up. An analysis of the cost of such rehabilitation showed that the Management was economical both to the parents and to the health unit, and socio-culturally assectable to the families.

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The impact of the nutrition at rehabilitation on the diet of the child and on the other young children in the families and in the neighbourhood was encouraging. However, the size of the sample studied was small, and the recuperation took 5.2 weeks, thrice the time taken by the hospital management. This domiciliary management was successfully carried out mainly through nurse-midwives.

In many villages nursing personnel are not available, and a medical Officer incharge of the Primary Health Centre has limited time and perhaps interest. The need is to cover a wider area with limited health personnel at a rural health centre in socially acceptable way. It is obvious that the problem cannot be solved by medical and pareamedical personnel alone. Hence, it is proposed that in the present study, part-time village social-workers or health assistants who will be given a short-term orientation and training, will be involved in the management.

OBJECTIVES:- I. To bring all the children aged 0-5 years, from the study area within the purview of the programme of domicillary management of moderate and severe Protein Calorie Malnutrition with the help of nursing auxiliaries and part-time village-level social-workers.

2. (a) To investigate the various causes of slow recuperation in domiciliary management
   (b) To evaluate the success of different measures to hasten the recovery.

3. To observe during the two years study period (a) the changes in the nutritional status of children in the community and (b) the variations in the mortality rate amongst infants and preschool children.

4. - To study (a) the cost structure and (b) the working time spent by various workers involved in the management.

5. To observe the impact of nutritional education on (a) the diet of the children and (b) the nutritional conciousness of the mothers in the community.

6. To formulate guidelines for organising similar nutritional programmes elsewhere under the prevailing health services of the region on the basis of the result of the study.

OUT-LINES OF THE PROJECT AND POPULATION COVERAGE:

Twenty villages/hamlets with a total pupulation of about 17900 till be taken up for the studies. Other three similar villages will be control villages. In coastal villages, may people are involved in fishing and in tribal villag s the pupulation is by and large backward. There is minimal communication between the study area and the controled villatges, Organised health

Except for Kelwa where there is one private medical practitioner, all the villages have no other health services. The sub-centres at (i) Kelwa and (ii) Navli look after the health needs of the pupulation in the study.

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STAFF TO BE INVOLVED:

1 & 2:Nurse Midwives and part-time Social Workers:-

The core staff of the project will be comprised of two nursemidwives and five part-time village social workers. Two nursemidwives, at present working in Kelwa and Navli sub-centres will be involved in the investigations. Five social-workers are to be appointed. The distribution of the work-load has been determined on the basis of the size of the pupulation and the distances between the villages and the halmets. At present she spends 60 percent of her working time on home visits, 25 percent in clinics and the remaining 15 per cent in record keeping and in school health. In the present study, she will spend 60 per cent of her total time for the complete health and nutritional care of 0-5 years old children, including homevisiting.

Qualifications of the Part-time Social Worker:- A person who has passed at least 7th standard and possesses organisational leadership will be selected. She/he should be in a position to work during the noons and afternoons for at least three hours. Preference would be given to the middle-aged mother, school teacher/village dai (Untrained midwife) or the wife of a village headman.

3. Senior Nurse: The public health nurse from the Rural Health Unit, Palghar, will also be involved. She will be

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putting in time proportionately i.e. 20 per cent of her total time in organisation, and in supervising and guiding, nurse-midwives and social-workers. She will be involved in the orientation and training programme, surveys, running of "Under-Five Clinics" and the nutritional programme.

4. Research Assistant: He/She will look after the maintenance of proper records in all the villages, hamlets, sub-centres and at the head-quarters. The Research Assistant will hep in community and evaluation surveys He/She will be responsible for data processing and analysis.

Qualification & Experience: He/She should be a person with a training in social Sciences and should be well versed in the technique of data-collection, data-processing and analysis. She/he will be selected by the selection-committee.

5. Medical Officer: The Medical Officer from the Rural Health Unit, Palghar, will put in a proportionate time i.e. 15 per cent for the health and nutritional programme of this project. In the proposed project, the Medical Officer is the Co-Investigator, and he has to put additional time outside his duty hours for the research activities. He will guide and Co-oordinate the work of the nurse-midwives and social workers, and examine children weighing 60 per cent of the Harvard

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Standard or less, and those suffering from Kwashiorkor and those referred to him, and will help in the diet-surveys and in studying the cost analysis.

6. Paediatrician: Being the Principal Investigator, he will be putting time out-side his duty hours for the study. Even otherwise, he visits the Rural Health Unit, Palghar, once in a week. With the help of the Medical Officer at Palghar, he will co-ordinate all the activities connected with the study.

The staff pattern, comprised of two nurse-midwives, one senior nurse and one medical officer, is similar to the pattern elsewhere at any Primary Health Centre in the Country. The staff members will proportionately divide their time between their unsual work and the work related to the proposed study and covering a pupulation of about 18,000 people.

DESIGN AND PLANS OF INVESTIGATIONS AND TIME SCHEDULES FOR THE FIRST TWO YEARS.

First Three Months:

(A) Orientation Course: An orientation course for eight days will be organised for the nurse-midwives and part-time social workers at the Rural Health Unit, Palghar. The course will be conducted in the local language, i.e. Marathi on Saturdays and Sundays in the first month of the project by the Principal Investigator.

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B) Pilot study and pre-testing: To observe the associated problems a pilot project and pre-test will be conducted during the 3rd and the 4th weeks in a different village, Umroli. The surveys mentioned below in C and D and the practice of record keeping and indexing as put in F, and the methodology of nutritional rehabilitation as in H, will be taken up.

C) Surveys and Research Studies: to have been worked out in detail.

D) Weight charts: The weight charts (Morley) specially prepared in the Marathi language will be filled up by the Social-workers and the nurse-midwife and checked up by the Social-woekers and the nurse-midwife , and checked up by the senior nurses, research assistant, Medical Officer and principal investigator. During the third month all the children in 0 - 4½ years will be charted on the weight card.

The Salter's spring dial weighing scales will be used as tese are handy. The scales will be checked every fortnightly with the standard weighing scale, which will be kept at the headquarters.

E) Nutritional Assessment: The assessment of nutrition for children between 0 - 5 years age will be carried out on the basis of their weights and heights. An attempt will be made to achieve a 100 per cent coverage. It is

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possible that the coverage may be of the order of 85 - 90 percent. The ages of the children will be confirmed by the local events calendar.

Classification: The children weighing 80 per cent of the expected weights (Harvard Standard) or less will be considered as malnourished for the study. The classification of the Nutritional sub-committee, Indian Academy of Pediatrics, is adopted for grading malnutrition; 71-80 per cent weight of the reference standard (Harvard) as grade I malnutrition, whereas 61 - 70 per cent, 51 - 60 per cent and below 50 per cent as grades II, III and IV malnutrition, respectively.

F). Records and Indexing: The master record register for the villages or hamlets will be prepared and duplicate weight charts of the children weighing 70 per cent of the expected weight or less will be kept in the village unit. A simplified indexing system will be evolved to plan the services to the children who are due for the follow-ups. The recording and indexing will be done by the nurse-midwives. They will be assisted by the social workers and guided by the senior nurse and by the research assistant. The records of births, still births, infant and preschool child health and migrations will be maintained. These will be cross-referred and checked. Separate records will be kept regarding the clinical notes, and economic aspects of the children weighing 70 per cent of the extexted weight or less.

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G) Control villages: During the second month, the surveys of socio-economic, environmental factors, and health status of children will be carried out. A random sample of 150 families will be drawn by the same team of workers in three villages, viz.: Murbe (Coastal). For the diet-survey the sample will be strtified on the basis of the weights i) All the children having 60 percent of less of the expected weights. ii) One-third weight of all the children having 61-70 per cent of the expected weights. iii) One weight of all the children having 71 per cent or more of the expected weights.

Fourth to Tenth Months Nutritional Rehabilitation:

H. Nutritional Rehabilitation: If the sitiation is comparable to what we had observed in the 1971 survey carried out in seven villages around Palghar, it is expected that in the pupulation of about 17,900 children in the age group of 0 - 5 years, it will be about 2400 or about 14 per cent. Out of these 2,400 children, about 3 per cent i.e. 70 will be weighing 60 per cent of the expected weights or less and about 42 per cent i.e. 1,000 will have 61 - 80 percent of the expected weights.

Nutritional education will be given at the clinics throught flannel-charts, photographs, charts and talks in small groups, and demonstrations will be conducted every week to show how to prepare various modified diets. This will be

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followed up at home through the domiciliary visits, Greater stress will be given to organise these demonstrations weekly at homes for individual mothers or for a group of mothers. The food habits and beliefs of local communities will be given due consideration. The parents will be encouraged to give their own diet supplements in the modified forms. However,it is expected that about 25 per cent of the children weighing less than 65% per cent of the expected weights or less will be extremely poor. They will be given nutritional supplements from the project funds.

Nutritional Supplements: There will be about 900 children weighing 70 per cent of the expected weight or less. Of these 230 or so may be from a very poor economic group. The economic status of the families is well known to the local workers in the villages and hence, it would not be very difficult to select these beneficiaries. These children will be given weekly nutritional supplements, either at the clinics or at their depending on their follow-up visits or the health workers' home visits. For Kwashiorkor cases, the supplements will be provided for a period of six weeks after the oedema subsides and when weight reaches 71 per cent of the expected weight, whichever is the maximum. For others weighing 70 per cent of the expected weight or less, supplements will be continued up to the time the weight reaches 71 per cent.

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The following locally available foods will be given daily in one form or the other:-

1. Groundnuts alternating with Bengal gram.
(a) Roasted (b) Mixed with jaggery (c) Roasted and powdered and mixed with jaggery to be supplied in form of balls "Laddu").

2. (a) Sprouted pulses, (Usal); (b) Soaked ground (Split dal (Pulses); "Amba dal" or (c) Gram balls or (d) Grams with jaggery in a form of slab. (Chiki). Preparations from sprouting pulses or soaked pulses are commenly used by this community and hence will be given fresh once or twice a week depending upon the visit of the parents or the worker.

3. Tilgul - a preparation from sesame and jaggery.

4. Fish in coastal Villages; Cheap fish, 300 gum. per child ~~bx~~ will be given once or twice a week.

A child will be given (i) 90 gms. of groundnuts or (ii) 120 gms. of pulses or (iii) 60 gms. of groundnuts or /sesame or /80 gms. of pulses with 25 gms. of jaggery.

For infants and young preschool children, soft preparations out of pulses, ground-nut Sand in coastal villages of fish will be given.

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Whenever mother's milk is not available, milk will be provided to infants below nine months of age. These supplements will be distributed as per time available, and a child will get at least 400 caloried and 15 - 25 gms. of proteins per day. There are going to be modifications in preparations, depending on the local conditions prevailing at the time.

For the study of the role of various diets in quick recuperation, the children in Kelwa village who will be selected as beneficiaries. They will be given 100 gms of fish daily along with 30 gms. of groundnut of 40 gms. of pulses preparations. All the children above one year in Kamare, Develop and Nandora will be given 60 gms. of Corm - Soya - Milk, 30 gms. of Jafgery and 10 gms. of oil daily.

Storage: Groundnut, pulses and sesame will be purchased in bulk and stored at the head-quarters. A Fortnight's quota will be ke t with a nurse-midwife or with a social-worker. Preparations will be made just a day or two prior to the distributions. The day's quota of the supplements will be packed into polythene bags and stapled. The local committee in these villages will be consulted while purchasing these food items in bulk.

Check on the intake of the nutritional supplements :

To assess the actual diet consumption in 24 hours by the beneficiaries, an attempt will be made to confirm the intake of food in 3 per cent of the children. This will be done

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by personal observations of a village social-worker or nurse-midwife. This comes to one child per health worker per month.

UNDER-FIVES' CLINIC & CLINIC ATTENDANCE:

Under Five Clinics will be conducted during afternoons in villages and hamlets. The frequency per week will vary from 1 - 4, depending on the local situations. In the villages whereon auxiliary nurse conducts clinics for mothes, these clinics will cpincide. The senior nurse and the Medical Officer will seperately visit thse clinics once a week.

Children attending the clinics will be classified on the basis of their weights and the frequency of their visits to the clinics will depend on their nutritional and health status and age-groups.

Children who are not brought to th Clinic in time, will be followed-up at home according to their age and weight, and their weights will be taken at home.

HEALTH EDUCATION :

Health Education on thecommon subjects will be carried out at the clinic and in the homes in small groups in the Marathi language. Flannel charts will be used for the health education.

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COMMUNITY HEALTH CELL
326, V Main, I Block
Koramangala
Bangalore-560034
India

IMMUNISATIONS :

Infants will be immunised against D.P.T. , Small-pox and Tuberculosis before they are six months old children who have not received these immunisation will also be covered. Booster doses of D.P.T. will be given, when due. The immunisation schedule mentioned in the W.H.O., SEARO recommendations for India will be followed.

DEWORMING AND TREATMENT OF AILMENTS :

The"Standing Orders" will be prepared for the nurse - midwives and part-time-Social-worker, to manage the cases of Diarrhoea without dehydration, U.R.I. Scabies, Ascariassis, conjunctivitis and similar minor and common ailments. The following types of cases will be referred to the medical officer whenever he visits the clinics or the - headquarters:-

i) Seriously ill children,

ii) Those who have minor ailments but continue to be ill for a week or more.

iii) Those who do not gain in weight.

iv) Those who lose weight,

v) Others in need of "Special Care".

The weight charts will be consulted to identify the - children following under category 3 and 4. All the children in these categories will be taken up for three monthly deworming for ascariasis, or for other infestation, if and [illegible]

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one fourth of the families will be examined, before giving the tablets for swqoenubf,. This is to study one of the probable causes of slow recuperation.

SERUM PROTEIN ESTIMATION :

Every fourth child in weight group E and every eighth child in weight groups C and D and all the cases of Kwashiorkor will b submitted for total serum proteins and albumin estimations. The investigations will be carrid out (a) initially, (b) at the time of clinical recuperation i.e. subsidence of oedema or when weight reaches 71 percent of the expected weight (c) at the end of the first year and (d) at the end of the second year. Twenty-five children having 81 per cent or more of their expected weights will be taken under control.

ANALYSIS OF COST :

The cost structure of the whole programme will be studied in detail which will involve the expenses incurred by the parents of all the children weighing 60 per cent or less, and every eighth child having 61 - 70 per cent of theexpected weight, on additional food, transportation, and that will also include a loss of their daily wages. The expenses by the health unit like, proportionate pay of the staff members according to time spent after the service part of the project; pay of social workers;

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expenses on medicines, petrol and proportionate pay of drivers, depreciation, proportionate interest on the capital involved, will be taken into account.

STUDY ON THE TIME SPENT BY THE STAFF MEMBERS :

All the workers involved in this programme will maintain their diaris regarding the time spent on various activities including nutritional rehabilitation programme during the 4th, 9th, 15th and 21st months of the study. (Copy of the time record sheet attached) These diaries will be received in the monthly meetings, and individually discussed with the Research Assistant and the Chief Investigator.

ELEVENTH AND TWELTH MONTHS EVALUATIONS :

The outcome of the domiciliary management will be evaluated during these two months by comparing the following parameters with the previous data.

i) Clinical improvement of malnourished children with reference to (a) subsidence of oedema and (b) per cent of weight gain (c) weight for height percentile (d) frequency and rate of recurrence of malnutrition.

ii) Weight for age and height.

iii) Serum albumin and total proteins.

iv) Diet analysis of children.

v) Infant and preschool child mortality rates as the end of the year and comparing with the previous figures.

vi) Change in to health and nutrition conciousness of the community.

The comparisons will also be made with the control villages.

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BUILT-IN-EVALUATION :

Three monthly summary records:- To evaluate nutrition status of children in the village/hamlets, three monthly summary records will be prepared and discussed. The children will be grouped according to percentages of the expected weights and persistence of clinical signs of Kwashiorkor.

SECOND YEAR OF THE PROJECT:-

The investigations will be extended to second year with the following objectives in mind.

i) To study the impact of the domiciliary management through 'Under Fives' Clinics' in each village or hamlet on the mutritional status of children under 7 years of age, and specially of those born during these two years.

ii) To observe the change in the nutrition and health consciousness of the community by studying (a) knowledge, (b) interest, (c) trial and (d) impact of nutrition and health education.

iii) To study the effectiveness of the different media to transmitted nutrition education.

iv) For a given population, to investigate the requirement in term of number of part time social workers and nurses-midwives to look after the integrated programmes for 0 - 5 years children.

v) To observe the impact if the nutrition rehabilitation programme on (a) perinatal, infant and perschool child -

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vi) To study the cost of running the programme under the present structure of the health services.

vii) To observe the impact of the programmes on the changes of agricultural products after two years.

viii) To investigate and study any other problem arising out of the first year's programme.

The plan of operation of investigations during second year will be more or less similar to the first years. However, these may be modified with the experience of the first year.

VILLAGE COMMITTEES FOR THE PROGRAMME AND COMMUNITY PARTICIPATION:

In each village and hamlet a local committee will be formed during the first week of the project. The members of the committee and through them the community will be requested to help in carrying out the programme. Their support will be obtained for getting food follow-ups at the clinics, in collecting various data and for surveys. Through this committee the local community will be encouraged to organise campaigns for environmental sanitation, developing kitchen, gardens and other health programmes. They will also advise regarding the nutrition supplements, their purchase and distribution. The committee will consist of nominated members from local administrative body (Gram Panchayat; two members including the headman (Sarpanch), two school teachers and two members from women's club (Mahila Mandal). The investigator will include

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will include two identified leaders in the committees. However, the size of the committee will very for small hamlets. Meeting will be held at the beginning of the programme and later at an interval of three months to plan and review various activities to promote communityconciousness of matters concerning child health and nutrition.

The Block Development Officer will be involved in the programmes from time to time.

REVIEW MEETINGS :

Joint meetings of nurse midwife, social workers, senior nurse, research assistant, medical officer and the Chief Investigator will be held fortnightly during the 3rd month and later on every month or Sundays to review the progress and discuss the problems and the future line of action. The meetings will be held in villages in rotations.

TRANSPORTATION :

Nurse midwives and social workers will be provided with cycles from the Health Unit and they will cover distances either by cycle, walking, or by bus. The medical officer, senior nurse and chief investigator will visit these villages and hamlets by the Health Unit's transport.

LOCAL GOVERNMENT'S CONTRIBUTIONS :

The proposed study area is the area under the Rural Health Unit, Palghar, Maharashtra Government. The services of the medical officer, one senior nurse, two nurse midwives, one driver will be nutilised as mentioned and they will put in

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a proportionate time for a population 18,000 people. The biochemist from the Institute of Child Health, Bombay will help in serum protein estimations. The necessary drugs and vaccines will be provided by the Rural Health Unit, Palghar Grant Medical College, Government of Maharashtra, Bombay.

HONORARY CONSULTATIVE ADVICE :

Hon. Consultant on -

Research Methodology : Miss. M. Khadekar, Unit for the Study of the Urban Child & Youth, Tata Institute of Social Sciences, Deonar, Bombay.

Other honorary consultants :-

Mrs. M.G.W. Hardiman, London, School of Economics and Political Sciences, Houghton Street, Aldwych, London, W.C.2 A, 2 AE.

Dr. P. M. Udani, Director/Professor, Institute of Child Health, J. J. Group of Hospitals & Grant Medical College, Bombay - 8.

Mr. Y. A. Kothur, Professor of Preventive & Social Medicine, Grant Medical College, Bombay - 8.

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P R O J E C T R E S U L T S

(A) DURING THE FIRST YEAR -

i) Continuous integrated health and nutritional care of all under-fives in project vilages, irrespective of nutritional stats, has been provided.

ii) An infrastructure of PTSWs and Nursing Auxiliaries has been created, and the problems associated with the planning of integrated health and nutritional services have been studied.

iii) Simplified methods of assessment of nutritional status by PTWSs have been devised.

iv) A manual on health and nutrition has been prepared in Marathi for the PTSWs.

v) Nutritional and health education in relation to the social background of malnutrition, given through clinics and homes, has become a project element.

vi) All under-fives in the project villages have been classified in relation to the Harvard Standard, and those weighing 65% or less, or who are from extremely poor families, have been given nutritional supplements, on a weekly basis.

vii) Immunisation of under-fives against infectious diseases has been undertaken, and periodic deworming (in specified villages) is being given.

viii) A system of built-in evaluation for local feed-back and surveillance and future planning has been developed.

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ix) [illegible] project programmes have been studied.

x) Community support, sponsorship and participation have been mobilised.

xi) An awareness of the significance of weight-per-age has been created even in the predominantly tribal villages

xii) The nutritional and immunisational status of children has improved. (Better results are expected during the second year, since the operational models have been performing satisfactorily for the last 4 months).

xiii) Because of the visible improvement in the health/nutritional status of under-fives in project villages, the team members are now considered helpful friends.

(B) DURING THE SECOND YEAR :

1. New Pattern of Delivery of Health Services.

The project has established a new pattern for delivering health services in which the services are brought to the Villages. A Board coverage of the sick and severely malnourished was achieved by using PTSWs from the communities served, and by promoting community participation, thereby bridging the gap between the existing health service pattern and the community. A domiciliary-cum-clinic outreach has been organised. Nutritional and health services have been integrated. Besides the distribution of food supplements to children identified as [illegible]y medically, these services

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have been extended to all the under-fives including the promotion of adequate growth through health education, immunization, the treatment of illness, the provision of special care for "at risk" children, and attempts to solve the social problems of the concerned families.

2) Maternal Surveillance :

For the last three months, the services have been extended to married women in project villages. The objective has been to provide care during the antenatal and post matal periods and during delivery, to bring down high perinatal, necnatal and infant mortalities, raise birth weights and, in so doing, increase the support for the project of all married women, and of the community at large. Health surveillance charts have been prepared for each married women. They have been devised by the project co-investigator(ARJ). They are used to record problems identified with pregnancy to detect preganancy early, to note when care is needed during antenatal and postnatal periods, and to alert trained personnel to arrange for deliveries. Through the charts "at risk" mothers are identified and given then necessary help. The charts provided a menstrual registry of the married women of the whole community and have a great potential role in relation to the planning of families. Infertile couples are also identified and helped.

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3. Communitywide, Continous detection of "at risk" children and mothers.

The "at risk" concept for special care has been well worked out in the community. On entering a village, the doctor or nurse is given list of the under-fives and mothers who are "at risk", which is compiled by the PTSWs and ANMs, and revised monthly, the local leaders are informed of the names of persons on this "at risk", list. In this way, the - doctors and nurses are able to see that most needy persons receive special care. About 66.6% of the deaths of under-fives during the year under report were of "at risk" - children needing special care.

4. Studying factors which impede growth :

About 8.5% of the under-fives in the community have been identified as "not improving or deteriorating". These - under-fives are submitted to various examinations, reviews of socio-economic and cultural problems, diet-analysis, through clinical check-ups, examinations of stools and urine, tubercular testings and chest X-rays. Subsequently, these under-fives are put under improvised, specific care. Guidelines are now being worked out for workers in the filed on how to deal with children whose growth is - [illegible].

5. Improvised simplification of methods ;

Simplified project tools and procedures have been improvised. Among these items are ;

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i) Weighing scales with dials in the vernacular language, and with protective tin caps,

ii) Swingseats for weighing,

iii) Shoulder bags,

iv) Very simple weight charts,

v) Plastic over-lay stencils for assessing nutritional grades,

vi) Comprehensive, but simple, mothers' charts,

vii) Index cards for assignment, identification and evaluation,

viii) Dials of the weighing scales and weight charts devised for illiterate, but alert and dynamic middle aged workers.

Many of these items, devised by the project, are at present being tested by the UNICEF, with a view to supplying such equipment and materials all over India during the Fifth Five-Year Plan.

6. PTSWS Waiting List for Jobs :

During the second year, the PTSWs got well accustomed to their assignments. All the eight posts were filled and there are two women who are on the waiting list if any vacancy arises. In remote tribal villages, two male workers have recently been appointed, in order to observe whether males can serve a certain capacity in those areas where it is very difficult to get female workers.

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7. Impact on Mothers -

Parents, but particularly mothers, have become 'weight-conscious'. Many of them interpret the trends in weight curves on weight charts and enquire of the PTSWs about the gains or losses in weights observed. This provides a good base for purposeful nutritional and health education.

8. Consolidating experience of PTSWs.

Of the PTSWs who have been working satisfactorily for two years, one has already been selected, and two more will be likewise selected for the posts of Supervisor of Part-Time Social Workers. This isbeing done with the object of placing greater responsibility and control (supervision, verification, checking etc., at times, guidance of the PTSWs) in the hands of persons who are from the communities involved. One supervisor will be looking after the work of three PTSWs, each covering a population of about 6,000 or 7,000 including her own 2,000-2,500 population, amongst whom she will continue her own PTSW activities. The effectiveness of the PTSW in the role of a supervisor is being studied by the project.

9. Empowering PTSWs to provide elementary treatment :

The PTSWs have been given standing instructions for the treatment of ascariasis and anaemia. They have been provided with tablets containing folic acid and iron, and piperazine. Whether there are other elementary treatments they could dispense to the patients, is being studied.

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10. Capacity to provide operational guidance :

The project is in a position to provide operational methodology for starting such programmes elsewhere in India, and in other developing countries, since basically the project operates under the normal constraints of health, man-power, materials and money. The cost benefit of establishing such projects elsewhere has been worked out.

11. Going further afield :

Based on the operational methodology of the project, similar programmes have been started or are being planned as follows :-

a) The Kasa Model Integrated Mother-Child Health-Nutrition Project (a model for adoption throughout the Maharashtra State) has been sponsored by the Government of India, The Government of Maharashtra and CARE-MAHARASHTRA. This project covers the entire population of 65,108 in 70 villages are served from th Primary Health Centre at Kasa, Dahanu Block, Thana District (about 125 kms. North Bombay),. The feasibility of duplicating on a larger scale, the integrated approach to pre-school and maternal health and nutrition, where the infrastructure includes the special Nutritional Programme in Tribal Development Blocks in under the consideration, existing health services, PTSWs

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and with community participation will be studied. The project will come into operation from November 1974. The W.H.O. aided project of Palghar will be providing the technical guidance for this project and the Principal Investigator of this project will be helping the Kasa Project as Hon.Project Director (Technical).

b) The Bohra community in the city of Bombay is proposing to organise similar activities for 10,000 people of a semi-urban community. Their doctors and three PTSWs have been trained at the WHO aided project at Palghar. The Project will serve all the members of all communities residing in 117 buildings in Bombay, and will come into operation shortly.

c) In a village, Kothara, in Gujarat State, 1,000 Kilometers from Bombay, the local people have started a similar programme in May 1973. Kothara has about 2,700 people, and the programmes are being worked out under the guidance of the Principal Investigator of the WHO aided project. The elements of the Kothara programmes are as follows :-

i) They are entirely financed by the local community.

ii) A doctor serving in their dispensary (which is not a government dispensary, but one started by the community) is carrying out these activities. The doctor was trained at the WHO aided project, Palghar.

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iii) Students from thelocal high schools weigh the under-fives, then follow them up and provide necessary help at three clinic sites and at their homes. They distribute nutritional supplements which are supplied by CARE Gujarat on a daily basis. The Government provides vaccines for these children.

iv) There is no nurse.

12. Assignments arising out of the project -

1. Because of the experience gained in this WHO aided project, the Principal Investigator was invited to become a member of the WHO Advisory Panel of National Experts on Integrated MCH and Family - Planning, Government of India. This panel met for four weeks during March, 1974.

2. Based on the study of "Periodic Deworming of Preschool Children and Effect on the Nutritional Status", the investigators were invited to lecture on the "Role of Periodic Deworming in National Programmes" at the International Symposium on Helminthiasis, Bombay, February, 1974.

13. Voluntary community participation :

Community participation was better during the second year:

i) Local communities provided rent-free clinic sites in all villages;

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ii) Initially 17, and later 11, needy under-fives, particularly infants, were provided with 240 ml, of milk per child, per day, during the year;

iii) Community contributions in terms of rupees, for milk and rent-free clinic sites, were Rs. 1995/- and Rs. 1860/- respectively that is, a total of Rs.3855/- during the year.

iv) It was difficult to approach one of the remote villages; but with the active participation of college students serving under the National Service Scheme, the local community constructed an approach road to the village.

v) There is less resistance to project activities in comparison with the first year.

8. P R O B L E M S E N C O U N T E R E D :

DURING THE FIRST YEAR:

1. Social acceptance :

As noted above, initially in two tribal villages there was resistance to project activities which was overcome through through persistent efforts, and by demonstrating that the services provided often led to the improvement in the health of the undernourished. These initially led to [illegible] some local elements in these villages, and occasionally, harassment. These problems were amicably resolved with the persons concerned. [illegible] that these communities will [illegible] in future.

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II. PTSWs :

Initially 3 PTSWs were hired, and later 2 others. Two of the original 3 resigned because of excessive work and walking, and because one became pregnant and the other could not stand initial social resistance and harassment by some drunkards. A third PTSW did not perform satisfactorily and was asked to resign. By February 1973, 3 replacements had been employed. Now 4 out of 5 are performing their tasps satisfactorily. The fifth PTSW has not performed well and has been terminated. That post will be filled shortly. To find the right type of woman for the job of PTSW is difficult. She should be enthusiastic, dynamic, socially conscious and with a desire to serve her people. Teenaged girls, or those in their twenties, are not sufficiently mature. Educational - qualifications also present difficulties, the greater theamount of education, the higher the expected remuneration.

III. Nursing Auxiliaries :

It was expected that to alter the routiness of nurses to which they had become accustomed through the years would be difficult, especially since project programmes involve more work and more walking. Of th two nurse, on was transferred for administrative reasons and replaced by a very enthusiastic nurse who is doing good work, and the other, although average, is involved in all the project acitivites.

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week. They are reluctant to ride bicycles. The timings of buses for the village visits are mostly inconvenient. However, both the nurses have modified their programmes, and have walked the necessary distances and are carrying out their work properly.

IV. GEOGRAPHY

No village was excluded from the pilot project because of difficulties regarding accessibility of due to working conditions, since the project aims at resolving all - problems involved in duplicating these programmes of the integrated delivery of health and nutritional services, elsewhere in India and in other developing countries.

V. Scarcity situation :

A lack of rain has caused conditions of severe food scarcity this year in many parts of India. Both in the projects and in the control villages, over the last few months, many families are surviving on roots; they are not able to obtain cereals or pulses. Under these conditions, the mothers are advised regarding the preparation of a gruel for weaning infants which is made from roots and not from rice.

VI. Rising Costs :

The cost of the nutritional supplements has risen 50% over the last year and is continuing to rise. The cost of other items has also gone up. Stationery and the printing of forms have cost much more than anticipated.

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DURING THE SECOND YEAR :

Problems Encountered: Some Alternative Tried and Further Suggestions :

1. Difficult Year: Drought, Rising Cost of Living :

Due to insufficient rains, this year was a year of drought and scaricity. Rising prices added to the misery. The cost of food grains went up by 50 to 100 percent. During thesummer months, some of the tribals had no food at home and could not get jobs. They are tuber roots which are not generally consumed. These factors affected the nutrition of all the under-fives.

2. Absence of Staff Members :

i) The Principal Investigator could not visit the project area for nine weeks during March, May and July, 74 for the following reasons :

a) One month during March 1974 he was in New Delhi for a meeting of the WHO advisory group to the Government of India.

b) During May, for three weeks, because of the strike by th railway staff. Other means of transportation between Bombay and Palghar were not possible.

c) In July, there were very heavy rains in Bombay and Railway Traffic was disrupted for two weeks.

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ii) The Co-Investigator was deputed for administrative training in Bombay for four weeks during June 1974.

iii) For more than 10 months, the post of Second Medical Officer, and for 40 days, that of Lady Medical Officer, were lying vacant, which lead to additional work for the Co-Investigator.

iv) Two nurses working in these villages were on leave for an average of 35 days, and that disrupted their services. It took an additional month for them to adjust to their scheduled normal activities in the project villages on returning.

v) Due to the shortage of staff at headquarters, one of the nurses was asked to take on additional duties at the Health Unit, Palghar, This caused a reduction in her visits to the project villages.

vi) During theyear, out of eight PTSWs, three were on leave for periods varying from two to five months.

vii) The posts of two PTSWs in remote villages were vacant for 3 months. These have been filled by one male and one female worker. At present, there are two trained candidates on the waiting list for PTSW posts.

3. Transport for enhancing the mobility of workers :

In October 1973, petrol prices went staggeringly high. The allocated budget for transport being limited (combined with the non-availability of petrol, even on payment, in Palghar town) lead to a diminished number of visits to

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remote villages by the Medical Officer and the Investigator. Whenever H.U. vehicles were going to such villages for other programmes, the Research Assistant often went along. Otherwise, he depend on a bicycle or public transport, and the timings for his return journeys were not convenient. In remote places, public buses did not ply and he had to walk. If low cost transport, like bicycles for PTSWs, scooters for nurses and Motor Cycles for the Research Assistant and Medical Officer are provided, the visits to these villages can be intesified. However, at present the nurses and PTSWs are shy about using scooters and bicycles as no other woman in these villages rides them. They should, and can be convinced to use them in time, since independent transportation facilities the movement of workers and, in turn, yields better organization of services and increases thework output.

4. Ensuring continuous arrangements for procurring supplies of nutritional supplements:

The supply of nutritional supplements, groundnuts and Bengal grams, was, at times, irregular. The supplements are purchased in Bombay, in bulk, at relatively cheap rates, Delayed supply was due to th rail strike, other transportation difficulties and local causes. The nutritional supplements received under the Special Nutritional Programmes (SNP), sponsored by the Government and CARE in four tribal villages, were supplied very irregularly. In all, the supplements were distributed for 250 days during the year. Supplements should be purchased locally if

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Bangalore-560034

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[illegible] difference in [illegible]. Otherwise, they should be purchased in advance in Bombay from wholesale dealers and transported to Palghar, in time.

5. Looking after children of working mothers, enabling the mother substitute to provide good care for the under-fives:

PCM in project children is due to a lack of calorie rather than protein intake. An increased consumption of food can provide adequate proteins and lower the calorie deficiency. An important factor which contributed to the low intake of good by the under-fives was the absence of their working mothers. During th time that their mothers are working, the under-fives (including infants) are being looked after by their young sisters or brothers of 6 to 10 years of age. These child-mother-substitutes had no knowledge of child care, and this led to a markedly diminished frequency of feeding of the infants and preschoolers, which resulted in smaller intakes of food. With the cost of living continuing to rise, more and more mothers will seek work, which will aggregate thesituation in the future. A mobile child-care worker for two/three villages, could feed th needy under-fives, all together, in improvised day-care centres, where the mother-substitutes could also be educated.

6. Mobilising local support for severely malnourished infants :

It has been observed in [illegible] project area that the introduction of [illegible] and solids to infants in [illegible]

contd...39/

were given semi-solids or solids for the first time during 9 to 24 months of age. This is one of the major reasons why the infants who were in th normal nutriational group last year declined by 71 to 80% of th expected weight group during their second year. Many of the infants did not get their mothers' milk during the day time, as their mothers were working. There were 32 infants (9.4%) who weighed less than 65% of the expected weight during the second year. Some provision should be made for weaning-food nutritional supplements for these infants, or the communities should be encouraged to donate milk for supplements for one or two infants per village.

7. Ensuring intake of nutritional supplements by the needy community participation :

Initially, one weeks supplies of nutirtional supplements for the needy under-fives were made to their families. This system proved unsatisfactory. It was observed that about 30 to 40% of the needy under-fives who received the supplements did not get the full benefit, since the supplements were shared by the older brothers/sisters. Later, 3 to 4 days' quota of supplements were provided, twice weekly. An attempt is now being made to find one person from each community who will collect all the needy children together, daily, and have them eat their supplements in her or his presence.

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8. Problem of low birth weight and subsequent malnutrition scope, for antenatal care :

The mean weight of 126 (out of 575) newborns from the project villages at the Palghar Health Unit maternity hospital was 2.7 kgs. Other newborns, delivered at homes, could not be weighed for the first time until a few days after birth. The overall birth weight of babies born in project villages may be much lower than 2.7 kgs. since this is the mean weight of the newborns of mothers from villages close to Palghar town.

These mothers were health-conscious and they took advantage of the health facilities during their antenatal period, and for th delivery, in th maternity hospital. Moreover, they could afford to spare the time to stay in the free hospital. Low weight infants continue to weigh less and to add to the list of malnourished children. An attempt is being made to cover all antenatal mothers under the recently started programme for married women in the villages, with the helpe of PTSWs and nurses.

9. Jobless period for parents, semi-starvation, scope for cottage industries.

On an average, the parents of the project children were jobless for three months during the year. This led to semi-stravation of the family members, including the under-fives. The development of cottage industries would help such parents all the year round, as well as during periods of extreme need.

contd.....41/

10. Methodological considerations :

1) Two of the three control villages did not turn out to be ideal counterparts for the project villages; the income of the households in the control coastal and tribal villages was more than in the corresponding experimental villages.

ii) Similarly, the control villages for the study of the "Effects of Periodic Deworming on the Nutritional Status of the Preschool Community" were not a good match. Hence, these were changed six months ago.

By January, 1975, this two-year longitudinal study will be completed.

The project has been extended to three more villages and there is a wider coverage of married women during the 3rd year,. The total part-time-social-workers now envolved are eight, and each looks after a population of little more than 2500.

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The third year progress report will be published by June '76 and the project will complete its 4th year by July '76. There are considerable accomplishments during these four years. The mortality rates have come down and the birth rate was 23.5 during June 74 - May 75. The nutritional status of those who were severaly malnourished, those suffering from A and Kwashirokow, improved. Lesser percentage of infants during 6 months to one year of age because malnourished, which is probably of account of the educational programmes to introduce semisolids and solids early in life at 4 to 5 months of age. The project has studied the problems of implementation of such programmes and has worked out a number of improvised methods and techniques. This is the first time that a study on the imvolvement of the village level workers was carried out, when the investigators did not know about such a system in India or abroad. The fact that the Government of India, Government of Maharashtra and CARE-Maharashtra extended the programmes in thounder-area to study the duplicability, shows the immense interest the project created amongst the administrators planners and health administrators. The scientific details have been mentioned in the progress reports.There are 15 publications and 8 backgrounds

III

INDO - DUTCH PROJECT FOR CHILD WELFARE
(STICHTING NEDERLANDS KINDERHULP PLAN)

6-3-885,Somajiguda
HYDERABAD - 500 004
Phone Off: 35938

AN INTEGRATED APPROACH FOR CHILD WELFARE
(The Chevella Experiment)
(DIRECTOR : Dr. H.W. BUTT)

BY

Dr.Y.C. MATHUR,
Additional Professor,Social Paediatrics,
Niloufer Children's Hospital and Osmania
Medical College, Hyderabad.

Dr. H.W. BUTT
Director
Indo-Dutch Project for Child Welfare.

the Government of India and Andhra Pradesh. An Indian Advisory Board with an Ex-Chief Secretary of Andhra Pradesh as its Chairman, and 15 members consisting of Secretaries to Government and heads of other Government and automomous bodies concerned with the programme, has been set up in India to advise the Project on policy and technical matters,

In Holland the Foundation has established a Board, the Chairman of which is a former Prime Minister of the Netherlands. The Royal Tropical Institute of Amsterdam is doing research on these schemes with the help of a special working group. The Foundation has established an Indian Bureau headed by an Indian Director-Secretary of the Board in Holland, constitutes the link between the Nehterlands Foundation and the Indo-Dutch Project. The duration of the Project has been fixed from 8 to 10 years.

IMPACT OF FIRST PHASE:

In the first three years the Project has been able to cover 6,222 families and 6,965 children in a population of 33,756 in 27 villages.

Regular medical care, total immunisation and recording weights, and the distribution of "Hyderabad Mix" has made it possible to eradicate discases of malnutrition in 7000 children. The growth reate among the children has been established which can be compared to the rates elsewhere in the State. Due to regular child care 212 mothers have volunteered for a permanent method to limit their families.

After a summary evaluation of the activities of the Project at the end of 1972 a new course of action was designed, in order to widen the scope of the Project and not limit the activities to health alone.

Five year plans were prepared on the different aspects in line with the objectives of the Project. Based on the experience gained a few specific schemes were introduced, such as:

a) Training of well qualified workers to carry a part of the load of the child health schemes.
b) Transfer of work currently done by the Niloufer Hospital team to the responsibility of the Primary Health Centre.

c) Linking of Mahila Mandals with economic projects such as preparation of protein packets and spice packets.

d) Direct involvement of the mothers in the preparation of supplementary food for their own children.

e) Experimentation with different types of pre-school education programme.

f) Starting of dairy and poultry units on a small scale to encourage small families to learn the machinies of such endeavours.

g) Establishment of creches, nutrition demonstration units. Vegetable and fruit gardens.

ROLE OF NILOUFER HEALTH TEAM:

The team now consists of one Professor of Social Pediatrics, one Assistant Professor of Pediatrics, one Assistant Professor of obstetrics and Gynaecology, one Assistant Professor of Preventive Medicine, one Dietician, one P.H. Nurse, one Health Educator, and post graduates in pediatrics. This team has been visiting the Centres since the past 5 years fortnightly.

The services provided are-

a) Curative services to the children who are ill.

b) Preventive immunisation

c) Antenatal, Intra,Post-natal services.

d) Nutritional services..

e) Health Education

f) Field Research

and g) Training of Auxiliary Nurse-Midwifes,Doctors,Under-graduates and Post-graduates.

The Ultimate object of the team is (1) to see that the Primary Health staff is so strengthened as to take over the work initiated by the team in the sub-centres and (2) to encourage the A.N.Ms in the sub-centres to attend independently to cases listed out in the standing instructions withoutthe aid of the niloufer team. At present the sub-centre at Shankerapalli is being managed independently by the P.H.C. staff. After completion of these tasks, the Niloufer Health Team can be withdrawn from the present sub-centres and sent to new sub-centres.

To achieve the above objectives, specially trained A.N.Ms. have been posted to the four sub-centres of Kunakamamidi, Tadlapalli, Maharajpet and Dhobipet, at the rate of 2 A.N.Ms per each sub-centre.Each A.N.M.

EARLY BEGINNINGS:

The Indo Dutch Project for Child Welfare is an experiment in a sleeted block of Hyderabad district. It started in late 1969 on the initiative of the Queen of the Netherlands, who established the Netherlands Foundation for Child Welfare as a special Dutch contribution to the well-being of children all over the world. The founders are the Netherlands Organisation for Development Co-operation, the Netherlands UNESCO Centre and the Netherlands committee for UNICEF.

AREA SELECTED:

Chevella Block, which is 26 miles from Hyderabad city, was selected on the principle that the experiment should be made in an area that would be fairly representative, i.e. not extra-ordinarily bad nor too favourable. Nearly eighty per cent of the total working population of this block is engaged in farming, but handicapped on account of the lack of assured irrigation facilities.

The average rainfall in the area is 60 cm and the cultivators in this area mainly depend upon rain and rainfed wells for agriculture. The soils of this area are of a chalk and sandy type with few patches here and there of black cotton soil. The major crops grown in this area are cereals like jowar, paddy ragi, Korra;pulses like green gram, red gram and black gram; oil seeds like castor and linseed. Cash crops like cotton, jute, tobacco and sugarcane are grown in an insignificant amount.

The area of the Block is 961.9 sq.kms. with 114 villages and 1,20,000population. Children in the age group of 0-9 years from 30.5 per cent. 10-14 years from 11.2% of the total population. Only 9.4% of the population is over 55 years of age.

There is a primary centre situated at Shankarapalli staffed by a male doctor and a lady medical officer. There are two civil hospitals in the block - one at Chevella and the other at Shabad. There are 9 sub-centres in the block.

There are only 10 per cent literate persons, who have studied upto the primary school and above. Malnutrition has affected the physical

growth of the children. The rate of morbidity is high.

Regarding the socio- economic conditions of the area 47.1% of the population belongs to backward communities, 73.6% of the families are of nuclear type and are still remaining as joint families. 54.1% of the fa have 6-10 members, 36.1% of the families have 1-5 members and 9.8% of t families have more than 10 members. 76% of the population is illiterate

One of the main objectives of the project is to make an effort to find ways and means of increasing the effectiveness of the existing services in child welfare by better co-ordination and to increase these services with better techniques. By focussing attention on the age group from 0 to 16 years the main goal of the Project is to produce, ultimately, ideal self-reliant individuals, healthy in mind and body.

SPECIFIC OBJECTIVES:

The project is an Integrated Child Welfare Project with a limited duration. It seeks the overall development of the child, at the same time promoting activities that can strengthen the economic basc of the Project as a whole. Training of personnel and population is an essential component of the Project. It emphasises repeatability as a criterian for recommending any activity for adoption by the State or elsewhere. Research and evaluation are an integral part of its educational process.

Instead of merely sanctioning grants and using foreign expertise, the strategy is to add minimum inputs, preferqbly at "points of entry", to produce a chain reaction with the emphasis on local initiative and existing resources. Instead of creating a separate hierarchy it aims at strengthening the local government structure, removing bottlenecks and demonstrating programme efficiency and public involvement. There is a continuous dialogue between the Government and the Project to ensure continuity of established programmes with successful practices, that can be taken over once they are initated by the Project. The activities cover all aspects of the health, education and nutrition connected with mother and child care, nursery schools, mahila mandals(women's clubs), Primary schools, youth development, nutrition demonstration units, creches, poultry and dairy and adult education.

METHOD OF WORKING:

The Project is a joint venture between the Netherlands Foundation,

is assigned a population of 5000 as against the normal pattern of 10000 each. For the home visits, the A.N.Ms have been equipped with specially designed kits with teaching materials. The A.N.Ms are being guided by the Niloufer Health Team and the P.H.C. doctors.

The health component:

The main reason for giving emphasis to the health component in this experiment since its inception is because child Welfare has been considered the highest priority, because the date collection on nutritional deficiencies as well as on low birth weight and immaturity, indicate that the deficient nutritional state of the population has become the most important factor influencing excessive mortality. Mothers who have been handicapped since early life by nutritional definiency and various adverse environmental factors probably give birth to low weight infants; many of these infants die from infections diseases because of their increased vulnerability, while those who survive continue because of nutritional deficiency to be at greater risk from the hazards of environment.

The pediatric and obstetric clinics held by the Niloufer Team in the four sub-centres and the Primary Health Centre at Shankerapalli was 215 in 1974 and 138 in 1975 up to the month of August. The total number of children treated at the pediatric clinics during 1974 was 17138, while it was 12499 in 1975 upto August. These include cases that have visited the clinics more than once.

The total estimated child population under 6 years of the entire Block according to 1971 census is 20,270. The Project area covers only 47 villages for which the estimated child population under 6 years is 7,898, in addition to which the villages under the Primary Health centre have a total of 2,248 children under 6. The total number of children treated in the five clinics so far exceeds the number of the entire child population of the Block, but this figure represnts the children who have visited the clinics more than once as well as children from outside area.

TO encourage better participation of the parents in the programmes of the Project, Children have paid an amount of fifty paise per head only for registration, to whom child growth cards have been issued. This amount

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Koramangala
Bangalore-560034
India

is deposited either in the local post office or in the local bank. To assure the communities that their amount could be utilised for extra drugs or services at a later date. This experiment which has been conducted for the first time is gradually being accepted by the families.

A Programme of training for the Dais was chalked out with the help of the Medical Officers of the P.H.C. and the Asst. Director Maternal and Child Care. Althougn the training period was expected to last for 6 months, the course was concentrated and limited to a month at the P.H.C. campus at Shankerpalli itself. This intensive course consisted of 30 theory classes, 20 practical demonstrations in areas of mother-child control of communicable diseases, treatment of minor ailments, and collection of vital statistics. The Dais were made to conduct deliveries under the supervision and guidance of the lady Medical Officer, Four Health visitors also assisted in conducting the practical and theory classes. A second batch of 16 dais was trained at Kanakamamidi in February, 1975.

Pre-School child:

The Project runs 12 Balwadis with a total strength of 665 children in the age group of 3 to 5 years drawn almost from the lower socio-economic groups,. There is now a general awareness on the part of the local population about the utility of Balwadis, in that their children are not only receiving education and training ingood manners but also receiwing a supplementary diet as recommended by the National Institute of Nutrition. It has been considered necessary to actively involve mothers in the programmes of the balwadis. Certain conditions have been laid down for the admission of the children to the balwadis, Such as:

i) Payment of a contribution of 0.50 ps. per month or 6 kgs.of Jowar or any other grain per year or in helping in the kitchen for the preparation of midday meals for four days in rotation.

ii) The children should be sent regularly and on time to the balwadis without the assistance of the helper.

iii) Parents should pay Rs.5/- for two sets of uniforms which costs Rs. 25/-.

iv. A mother's committee of five will supervise and manage the midday meals for the children.

The response to this new system was on the whole very encouraging. Though, there have been some dropouts due to admissions into Primary Schools, yet a good number of new admissions took place, bringing the total strength of the childfen in the balwadis to 525 as on date. The progressive total of monthly contributions received so far is Rs. 1848.75 in cash plus 244.500 kgs of jowar, wheat 36 bags and 5 kgs of tamarind respectively, and which lies deposited in the respective post offices where the balwadis are situated. Mill cloth to the tune of Rs. 4991-82 has been purchased at controlled rates and uniforms got stitched for the children through the mahila mandals by offering the latter an economic incentive like payment of labour charges to the members who know stitching. As mothers have started contributing their share either in cash or kind as stipulated above, there has arisen the necessity of supervising the working of the programme more effectively, particularly the midday meals programme where a supplenentary diet, according to the nutritional requirements of the children is served. A mother's committee of five has been formed for every balwadi to supervise and manage the distribution of meals to the children.

As registration fee, an amount of Rs. ;028 was collected during 1974 and Rs. 633 in 1975 upto August, bringing the progressive total to Rs.2489.65 Injections were given to 4862 children in 1974 and 4980 children in 1975 up to August. Similarly the number of children i munished during 1974 and 1975 upto August was 4715 and 3090 respectively. In 1974, 5571 protein packets were given to 628 children suffering from malnorishment and in 1975 upto August, 4737 protein packets were given to 465 children.

The menu per child per day consists of the following:

Upma	..	80 grams daily
Laddu-Ragi	..	
Millets	..	Occasionally
Egg.	..	Once a week
Milk	..	4 Ozs a week
Vegetables	..	100 grams daily.

Due to the gaps in the receipt of the CARE material certain alternate arrangements have been made to obtain jowar, pulses etc. from the one hectare demonstration units and eggs and milk from the poultry and dairy demonstration units started by the local farmers with the assistance of

the Project. These units are helping to a lar e extent in maintaining the continuity of the midday meals programme in the balwadis. The cost per child in the balwadis works out to 0.50 paise per day.

As for pre-school education only such balasevikas who have undergone eleven months training at the Andhra Pradesh State Council for Child Welfare, Hyderabad have been employed in almost all the balwadis. As they largely belong to urban and other areas, they have not been able to develop a sense of belonging to the villages, resulting in frequent absen from duty on some pretext or the other. To overcome this problem young to mothers are being given an ad-hoc training to serve as assistants to Balasevakas. Three mother teacher training courses were conducted upto now ones at Shankarapalli in July 1974, the second at Kanakamamidi during November 1974 and the third at MAHARAJPET in March 1975. All the three courses were conducted with the cO-operation of the Andhra Pradesh State Council for Child Welfare, wherein talks and demonstrations were given on health and on the nutritional needs of children; 47 young mothers in all w trained in all the three courses. Six trained mother-teachers are now being utilised as assistant balasevikas or assistant craft teachers in the mahila mandals. A few presidents of the mahila mandals have also undergone this training. The minimum qualification prescribed for the training for these young mothers is that they should have studied at least upto class V.

Steps are now being taken to start a model balwadi-cum-field training unit at Chevella, the Block headquarters to conduct the mother-teacher training for the young mothers of the surrounding villages.

OBSTETRIC SERVICES AT CHEVELLA BLOCK

From the preliminary survey undertaken by the members of the health team it was evident that health services for pregnant women were practically non-existent in this block area. The people also did not have any concept of antenatal care. The acceptability of the family planning services was also poor. Background informationof the village was collected at the time of basic line survey to understand the socio-economic and cultural behaviour of the people. Based on this information, community health services were formulated.

Maternal components of community health services:

1. Ante-natal, intra-natal and postnatal care.
2. Well-women's services and gynaecological services.
3. Inservice training of the health staff.
4. Training of the traditional birth attenders,
5. Maintenance of vital statistics.

All the pregnant women of the area under study were contacted by the auxiliary nurse in charge of that area and were motivated to attend, the antenatal clinics. At the clinic regular atnenatal checkups were done, iron and folic and supplements were issued. Initially when the programme started antenatal examination were being done by the obstetrician in charge. Later, in 1974, thinking in terms of repeatability of the programme it was decided to make the auxiliary nurse run the clinic independently. Routine anta-natal examinations were then done by the auxiliary nurse herself and the services of the specialists were utilised only for screening of high risk cases and their management.

Training of indigenous birth attenders "Dais":

Results of base-line survey showed that nearly 80-85% of the deliveries in this area were being conducted by untrained barber midwives. As medical facilities in rural India stand today, it is not possible to do away with this category of personnel who, by virtue of their stay in the village, are able to conduct a maximum number of deliveries. They form useful members of the medical community.It was thus decided to give them training as to how to conduct deliveries in an aseptic and antiseptic manner and as to how to

detect cases requiring referral services. They were provided with UNICEF delivery kits. So far 52 dais have received training batches. The table below shows the category of persons conducting the deliveries the start of the programme and 2 years later in the villages surrounding the Primary Health Centre, Sankarpally.

Category of persons Conducting delivery.	Before health Services were started.	Two years a starting the p
Untrained Dai	85%	30%
Relative/Friend or Negighbour	6%	1%
Trained Dai	2%	52%
(A.N.M.(Auxiliary Nurse-Midwife)	2%	5%
Doctor	5%	12%

Many deliveries were conducted by the local dai were supervised by auxiliary nurse midwife.

NEONATAL TETANUS:- The incidence of neonatal-tetanus was very high in this area (3% in general population) amounting to 27% of infant deaths. Unhygienic ways of living, close vicinity of animal sheds to human dwellings and certain cultural practices like application of cow du to the umbilicus of the newborn were all responsible for this high incidence of neonatal tetanus of Routine immunization of pregnant mothers against tetanus, health education and training of indigenous dais have helped remarkably in bringing down the incidence of this disease.

Birth weight of the new borns:

T he problem of low birth weight babies is considerable in this area and is attributable to maternal malnutrition and heavy physical work done by these pregnant women till the later weeks of pregnancy. A diet trial conducted in this area showed that, on an average, a pregnant women lacked 500-700 calories and 10-20 grams of proteins in her daily diet. A supplementation of iron and folic acid and extra diet resulted in improved maternal weight gain and birth weight of the newborn.

Birth Interval Studies: Studies on fertility aspects are occupying an important position in the present understanding of population dynamics. In a developing country like India, where women are married early in life and reproduction starts early, it is important to obtain the information

regarding birth interval, as it has a bearing on the rate of population growth. Studies were also done co-relating the inter-pregnancy period of child morbidity and mortality. Our observations showed that the mean birth interval in this rural area was 31.46 months. This fairly good interpregnancy period is a result of prolonged breast feeding which is generally practiced in this area. Child Morbidity and mortality when co-related to birth interval showed that there was a declining trend in morbidity and mortality with increasing interpregnancy interval but an appreciable decline was observed only when the interpregnancy interval exceeded more than three years.

Family Planning Services: The family planning drive was very encouraging in our study area and we personally feel it is the result of improved M.C.H. Services. ABout 33% of the eligible couples of a priority group (with three children and more) are sterilised in the block. Amongst the family planning methods female sterilization seems to be more, popular. The table below shows the number of operations performed in P.H.C. Shankerpally, since the time the project is functioning.

Year	Vasectomy Operations	Tubectomy Operations.
1970 - 71	95	134
1971 - 72	45	262
1972 - 73	700	218
1973 - 74	9	196
April 1974 to December	2	265

The total number of women who attended the obstetric clinics from the villages in the Project ares is 7456 in 1974 and 7196 during 1975 upto August. These figures include cases that have visited the clinics more than once. One of the significant features of these child care programmes is the spontaneous acceptance of the limitation of family six because of child care. While the number of tubectomies performed and tubectomized cases seen during 1974 were 240, and 1438 respectively, they were 98 and 1513 during the period upto August 1975. In addition, 30 cases have been referred to hospitals for tubectomy. The antenatal cases treated

during 1974 were 3826 and during 1975 upto August were 3537. The registrationfees collected furing 1974 were Rs.576 and in 1975 upto August were Rs. 410-50, bringing the progressive total of collections to Rs. 1198.30.

The specific achivement of this input in this expirement has been the improvement in the health status of the children, increase in weight height and growth of the child with indications of reduced mortality and morbidity. The emphasis of this input has been the presentive side of health care and to develop a better concept of mother and child health, nutrition and family planning. The most significant achivement of this input during the first 3 years of the Project has been the eradication of diseases of malnutrition in about 7,000 children by using a protein supplement known as the 'Hyderabad Mix'. Another achivement has been the spontaneous acceptance of a permanent method of family planning by mothers who were assured that their existing children will survive through child care.

Hyderabad Mix:

These are protein packets meant for infants, children and pregnant mothers who attend the clinics at the sub-centres. They are now prepared by the members of the Mahila Mandals in the Project villages from out of locally available material. The ingredients consist of 1) Whole wheat (2) Split chic peas (3) Shelled peanuts (4) Jeggery and (5) Skimmed Milk powder or specially processed Soya flour. The quality of the ingredients and the production of the protein packets is supervised in the villages by a dietician. The members receive a profit of about 4 paise per packet of 70 grams. The project distributed these packets to about 1093 childre during the period January 1974 to August 1975 who attended the clinics.

Training of Dais:

T decision was taken in 1974 to train Dais in the Project village with the view to strengthen the hands of the newly trained A.N.Ms. Accordingly, as per the statistics collected by the A.N.Ms, it was found that there were about forty-four untrained Dais in the area.

Mahila Mandals:

There are now 12 mahilamandals functioning in all the 12 village

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covered by the Project assisted by craft teachers. The number of rural women enrolled as members in these mandals are 200. They are mainly taught embroidery, tailoring and cooking. Some members who are interested in possessing their own sewing machines have been furnished with the machines on an instalment basis. To interest the average rural women, the project has initiated certain economic projects whereby the women can supplement their monthly incomes. They are (1) stitching uniforms for the children in the balwadis (2) preparation of spice packets (3) Preparation of protein packets (4) embroidery, bangle making and other handicrafts.

The members are allowed a wage of Rs. 1/- on every kilo of chillie powder and 50 paise for preparing dhania and sambar powders. A net profit of Rs. 2/-1481-75 has been made during 1974 which will be transferred to mahila mandals as a revolving capital based on their performance as soon as they are registered. There is now a good demand for these spice packets. The members of the mahila mandals, Shankarapalli, Maharajpet and Kanakamamidi were trained in the preparation of protein packets under the supervision of the dietician of the Niloufer Hospital. The mahila mandals are given a net profit of 4 paise on a packet of 70 gms. each. They are now able to prepare and supply the required quantity to the clinics.

It has been found that in certain villages, women are found engaged in certain village crafts like the making of mats, hand-fans, bangles etc, The Project has now taken up through the mahila mandals intensification of these activities. The women are now being supplied the necessary raw materials like threads, beads, designs etc. for preparation of plastic bead bangles, bags, etc. There is a good demand for these handicrafts and the profit derived on these sales will be pushed back into the revolving fund of the mahila mandals.

Papaya and drumstick cultivation:

Instead of insisting on kitchen gardens which again have not provide very successful because of shortage of water, land and fences in the village, steps have been taken to promote the idea of growing papaya and drumstick trees. These two have a significant bearing on the nutritional aspect of the programme. Simple facts such as these are communicated to the farmers, mothers and school children: Papaya cultivation is easy, the trees do not need much water; they bear

fruit in 9 months, papays can be sold in the market for rupees one to t each depending on the size, the nutritive value of the fruit and the leaves of the drumstick trees are very high for children and mothers. During the year 1974, 400 seedlings were supplied to different villages at the cost of 10 paise each, which has not been very successful. One o the major reasons is the strong traditional notion among women that papaya induces abortion. Most of the women in the villages cannot bear the sight of papaya trees. Efforts are being made to attract the attention of the children and the farmers and to convince the village mothers that papayas are not the main cause of abortion. In the monthly meetings the craft teachers and the balsevikas have been encouraged to get balwadi children to grow papaya trees in their homes so that it could be an indication in the village that all homes that have papaya trees have children in the balwadi. Another step in this direction has been the encouragement of urban school children to visit the rural children and talk to them of the benefit of the papaya as a nutritious fruit, and encourage them to dig a pit and sow the seedling as a sign of friendship between the urban and rural school children.

Demonstrations that the leaves of drumstick trees are very nutritio for infant foods and weaning diets have been given by the M.Sc. students of the Home Science College. The members of the Mahila Mandals are being encouraged to grow these trees in their backyards, which grow very easily and need very little attention. Seeds and stalks of these trees have been distributed to each balwadi and craft teacher.

Individual Dairy Farming Units:

As milk is an important component of the nutrition programme loca farmers were encouraged to use improved breeds of milch cattle by advanci loans and providing them with technical inputs. In this way the main object was not only to benefit the farmer but also to involve him in programmes of child welfare.

The scheme of individual dairy farming was introduced to obtain the following advantages:

a) Assurance of a regular supply of milk to the creches and balwadis.
b) Improvement in the economic status of the farmers.
c) Enhancement of the psycho-physical aspect of the mother and child.
d) Help farmers to participate actively in the programmes of child-care, balwadis and primary schools.

The Hyderabad District Co-operative Bank offered to advance loans to selected farmers for an amount of Rs. 1 lakh if the Project is prepared to provide 25 per cent of this amount as security to meet any emergency. This offer was accepted on condition that if the entire loan advanced to farmers was repaid, the security amount could be utilised either for other farmers or returned to the Project. It was decided to select 5 farmers from each balwadi village and advance them an amount of Rs. 1800/- to purchase improved breeds of milch cattle.

The farmers agreed to allot $\frac{1}{2}$ acre of their land to grow fodder crops and to supply milk to the balwadi at the regular market rates. The farmers were also expected to attend the training progr mme organised by the Project and the Andhra Pradesh Agricultural University.

An mount of Rs. 27,000/- was sanctioned to 9 farmers in 3 villages, Upto 31st August, 1975 an amount of Rs, 2522-13 has been recouped in the shape of 1701.75 litres of milk supplied to balwadis and creches. In addition to this amount the farmers are repaying the loan directly to the bank. The Project advanced an amount of Rs. 18,250/- to the Bank towards the 25% security to serve in any emergency.

Individual Backyard Poultry Units:

The main objective of establis_ing these units was to encourage the youth and members of the mahila mandals to start economic projects that would give them quick results in a relatively short time and also provide the necessary inputs for sound nutritional programmes for expectant mothers. In the first stage 9 families came forward to take advantage of this scheme by constructing their own housing units.

Twenty mixed breed leg-horns costing Rs. 275/- were given to each family on condition that the loan amount is repaid during the period of one year by giving the balwadis 4 eggs per day out of the average production of 15 per day. Two out of the 9 units were successful, where the farmers

not only increased their stock but also repaid the entire loan amount before the prescribed time. Two were a complete failure where the farm sold out their birds due to a few casualties. The results of the remaining five were below average. Inspite of this the total egg production was 9,903 out of which 2,622 were supplied to the balwadis. Thus a total of Rs. 1,680.13 was recouped with a balance of Rs.1,042.1 had to be recovered.

In the second stage instead of 20 birds, 40 pullets of 10 to 12 weeks old costing Rs. 7/- each were supplied to 6 farmers. The farmers had to incur an expenditure of Rs. 160/- to Rs. 180/- till the birds started laying; despite this they would be able to r pay the entire loa of Rs. 238.40 in a period of $3\frac{1}{2}$ to 4 months at the rate of 8 eggs per d

Although these experiments are not economically viable they have resulted in providing the necessary practical knowleve to individual members of the mahila mandals and youth clubs. The risk in these experiments has been comparatively low but the advantage has been that a few individuals have been convinced of the utility of such endeavours. Resulting from these failures, is the success of two efforts: 1) the establishment of a 500 bird unit by a youth club which can be utilised for purposes of training, (2) the starting of 200 bird units with one da old chicks. Steps were being taken to tray various experiments - rearing 700 one day old chicks to be supplied to youth trained in poultry; impro the breed of the local variety of birds - by sustituting improved cockerals in place of local cooks; introducing a new cafeteria system instead of a regular poultry feed, so that the birds can pick and chose the ingredients of the poultry feeds of their choice; introduction of the deep litter system as well as the open yard method.

Nutritional Demonstration Units:

The main objective of the nutritional demonstration unit is to establish a chain of demonstrations for cultivating the required crops by the farmers; utilising the produce in the preparation of midday meals, supplementary foods and protein packets by the members of the mahila mand and organising an effective nutritional education programme to educate th village community by the balsevikas, craft teachers, and the ANMs.

Although this scheme relates to the cultivationof crops by the farmers, the nutritional aspect is highlighted because of the growing of such crops that from the basic ingredients of a nutritive diet. The emphasis in these demonstrations is not merely on the package of practices for obtaining higher yields but on the appropirate crops according to the type of the soil and its moisture.

The efforts made in this scheme are unique because of the co-operation of the Dry Farming Project Team of the Indian Council of Agricultural Research, the Extension Team of Andhra Pradesh Agricultural University and the College of Home Science. As a result of several meetings held by this working group the cropping pattern has been tailored to the requirements of the balwadis, creches, and clinics, keeping in mind the type of soil and irrigation facilities. As a result, instead of using groundnut in the "Hyderabad Mix", cowpeas have been substituted because of the lack of irrigation facilities in the area. A new type of soyabeans has been introduced along with the latest dwarf warieties of jowar, bajra and other crops. The specific objective in designing the cropping pattern is to convince the farmers that, inspite of the lack of rainfall, irrigation facilities and fertile soil, suitable crops can be grown even with the limited facilities available.

In six plots in the villages of Shankarapalli, Singapur Bulkapur, Dhobipet, Ramanthapur and Kanakamamidi we have been able to cultivate 1.30 hectares of jowar, 2.06 hectares of sunflower, 0.94 hectares of cowpeas, 1.19 hectares of soyabeans and 0.74 hectares of bajra.

An agreement was reached with the farmers that the cost of production would be shared on a 2/3rd and 1/3rd basis i.e. the supply of fertilisers, seed and pesticides would be the responsibility of the Project while the farmer would be responsible for all operations of labour etc. The crop, on being harvested, will be shared on a fifty fifty basis. At a very minimum estimate the working group has calculated a net profit of Rs. 1,000/- at the current available price of the produce.

The only snag in these demonstrations has been the long gap in the rainfall of nearly a month which has had an adverse effect on the crops. Despite this the recent rains have had very good effect on the joware crop. Soyabeans and sunflower crops were satisfactory. Cowpeas had to be

replaced by another crop of Sorghum, the sowing of which had to be taken up immediately. At the minimum estimates the working group has calculated a ton of grain as our share despite the set back we have had. The farmers of the six hectare plots were excited at the new dwarf variety of jowar (Sorghum) with the large earheads. Efforts are being made by the extension staff of the Agricultural University to utilise these demonstrations to educate the farmers in the methods of cultivation of this new crop. It was originally planned to purchase the share of the farmers at the current prices but the group felt that, as the farmer is proud of this crop, he should be given the choice whether he would we his share to the Project or keep it for himself.

Creche:

A creche was started at Kanakamamidi in August 1974 with 20 chil in the age group of 1 to $2\frac{1}{2}$ years. The criteria for the selection of these children have been:

a) that while mothers go to field for work, there is no assistance at home to look after the children.

b) that mothers should be willing to attend demonstrations held at the Creche for educating them about nutritive diets for children, causes for the vitamin deficiency in children and its eradication, child rearing practices etc.

c) Mothers should be willing to pay 50 paise per month per child for admission to the Creche.

These children receive a planned diet consisting of 100 mls. of mi at 11 a.m. Kitchidi prepared with 30 grms. of jowar flour, 30 gms. of green gram and dhal and green leafy vegetable at 1 0.m. and wheat porridge with jaggery at 4 p.m. The mothers leave the children between 10 A.M. to 5 P.M. at the creche under the care of the 2 helpers who give the children bath and comb their hair. The health visitor, with the assitance of the ANMs, looksafter the feeding and health of the children.

A control group of 20 children is also selected of the same age group and socio-economic status receiving no such attention as the children in the creche for longitudinal study of the physical and mental

growth of these two groups of children. The Organisations involved in the establishment of the creche by the Project are CARE, Home Science College and the Niloufer Hospital.

CONCLUSIONS:

This pilot project initiat i by the Indo-Dutch Project for Child Welfare in close collaboration with the departments of Health, Education Social Welfare and Panchayati Raj is struggling to make an impact of an integrated approach to improve the quality of life for the child and youth in a limited area of a block with the basic objective Of repeatability, training and involvement of the rural families.

Nutritional programmes should be linked up with economic projects that could assist rural families in supplementing their family income while providing the necessary ingredients for a nutritious diet.

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INTEGRATED NUTRITIONAL AND HEALTH PROGRAMME IN URBAN CHAWLS, B O M B A Y

(Sponsors: His Holiness Dr.Syenda Taher Saifuddin Memorial Foundation Trust.)

BY

DR. T. E. Biviji.

COMMUNITY HEALTH CELL
326, V Main, I Block
Koramangala
Bangalore-560034
India

I N T R O D U C T I O N

according to the 1971 census of India there are 228 million children upto the age of 14 years out of which 42 million are in urban areas. The incidence of mortality, morbidity and malnutrition are higest among the under-sixes. There are about 22 million under sixes in the urban areas of India whose health is influenced by socio-cultural and economical factors. The occurance of diarrhoea, respitory, parasitic and infectious diseases and skin infections is fairly common, affecting the physical growth and the development of the mental capacity of the children. Unsatisfactory dietary habits, weaning practices, poor knowledge of nutrition, health and hygiene aggrevate the problem.

It is surprising to note that thered are many doctors practising in cities. Still a percentage of children having malnutrition of fairly high. There are few doctors in modern cities of India who have a weighing machine for babies. Thus, it is like poverty in the midst of plenty. In spite of a high ratio of doctor to patients in cities recurrent and chronic ailments continue in children resulting in secondary malnutrition.

This Public Charitable Trust has been established on 18th March 1966 by His Holiness Dr. Ayenda Mohammed Burhanuddinsaheb, the 52nd Religious Head of the Dawoodi Bohra Community, in the revered memory of his predecessor-in office, the Late His Holiness Dr. Syendna Taher Saifuddinsaheb.

The project area is situated in Bhendi Bazar, Bombay 3. This area includes Pakmodia street, Dhaboo Street, with eight cross streets. The buildings are either two storied or for storied. Almost all families are having taps inside their houses. There is a common latrine for each floor of the building. Small gullies in between two buildings are full of dust and dirt. The place is full of hawkers selling eatables which are unhygienic. The population staying there is educated and well informed about the world and about the national problems. The total population of the project are is about 10,000.

O B J E C T I V E S

1. To bring all the children aged 0-5 years from the study area within the purview of the programme of domiciliary outrach fo moderate and severe malnutrition with the help of a nurse an social workers.

2. To provide nutritional care to those children who are under years of age residing in the project area, to give health and nutritional education to all and nutritional supplements to severely malnourished children. To give health education to mothers, so hat they learn the dnutritional requirements of children at different ages, d the nutritional status of differ food stuffs and how to prepare cheap and nutritious dishes fo themselves while cooking, and how tos protect their children against accidents in the existing environments of a city.

3. To immunise the wulnerable population against small-pox, Tuberculosis, Dipetheria, Totanus; whooping Cough and Poliomy -elitis.

4. To plan the family in wuch a way, as to give maximum health development and educational benefits to the children.

5. To lay the foundation for a proper physical, physioligical an social developments of a child.

6. To prevent infection by improving the prevailing condition in t community, and co-ordinating activities with other bodies for e.g. municipality and Government health schemes.

7. To provide effective referral services

The following services are provided by the scheme:

1. Suppementary nutrition.

2. Immunisation

3. Health check up and treatment of illness.

4. Referral service.

5. Health and nutritionals education.

6. Promoting positive development of young children.

T Y P E O F B N E F I C I A R I E S

1. The scheme provide integrated services to children below the age of 5 years. It is based on the consideration that pre-school age can be considered as a definite phase in the development of a child. Further early childhood is more crucial for a child's development and therefore it is more practical to make a concrete effort in promoting such development in early childhood.

2. Since the mother holds the key role in the development of a child, shee is brought under the scheme.

P R E P R O J E C T A C T I V I T I E S

Previously a clinic was held under the auspicies of His Holiness Dr.Syena Taher Saifuddin Memorial Foundation Trust on every Wednesdayd at Saifee Ambulance premises at the Child Care Centre at Khara Tank Road, Bhendi Bazar Bombay, for the children upto 14 years of age of parents residing in the particular locality where there is a population of 10,000.

The children from birth to 1½ years were weighed, examined and the mothers were advised, regarding the feeding of a child by an Hon. visiting Pædiatrician. These were free.

It was learnt from the experience of this Clinic that the mothers were not well informed about proper immunication, they were not aware that health check-up is necessary in childhood, so that malnutrition is detect in time and proper management is advised with diet. The outstanding findi were that in about two years' time only 93 children were seen whereas we expected many more to attend he centre. This showed the indifference, inertia or inactivity on part of the mother to come to the centre and th failure on the part of the clinic to reach them.

The survey of the community revealed hat there was a great need early detecting preventing and treating malnutrition and other illnesses the vulnerable segment of the population under fives.

So a comprehensive programme on the line of the programme organ-ised at the project at Palghar on Domiciliary treatment of Protein Calorie malnutrition, which is being run under the guidance of the Institute of Child Health, J.J. Group of Hospital, Bombay was planned out by the above Taust, and put linto operation from March 1st, 1975.

G O V E R N M E N T A L C O L L A B O R A T I O N

The Government of Maharashtra has been kind enough to allow us to take the help of Dr. P.M. Shah, Professor of Pediatrics, J.J. Group of Hospitals as an Honorary Advisor.

For effective referral services for the complicated cases of malnutition, we have been taking advice and treatment from the J.J.Group of Government Hospitals and from the Grant Medical College, Bombay.

T R A I N I N G OF P E D R S O N N E L

In the 1st week of June 1974 a visit of the local doctors practising in Behendi Bazar area, to Palghar and nereby villages and hamlets was arranged.

Four part-time sockal workers, all female, from the same urban community were selected, and were given lectures by the Hon.Pediatrician attached to the present project. Out of these four, two social workers were appointed and one worker resigned whose place was filled in by another female social worker, who also works as a clark. The medical officer has been appointed for the centre, who has beend practising in the project area for the last 5 years. The Hon.Pediatrician has been practising in the same area for 10 years.

C E N S U S

In April 1975 a census of population and percent population of children under five years was carried out. There were many buildings at that time in the project area under repair by the Bombay Municipality Housing Board.So many families had shifted to other areas for a short time. 601 families were covered in 102 buildings in these areas with a population of 10,000.

In March 1976 a second survey was done by the Ssocial Workers. They visited about 50 buildings by the end of the month. The population of 4,184 having a total of 449 children below 5 years, which constituted about 10.7% of the population, has been visited at their houses and the children have been weighed.

I N V O L V E M E N T OF T H E L O C A L D O C T O R S A N D L E A D E R S

This selected area has two streets with eight cross streets. There are many private practitioners having a practice for 25 years in that area.

All of the practitioners were invited to the Integrated Child Care Centre, they were apprised of the proposed programme. They were particularly told refer a case of malnutrition to the management by the Centre Staff, undue tely the case would be sent to the practioner for treatment. In the beginn ng several doctors referred cases and for each referred case a note was se with guidelines for the management. But this practice slowly died down. The local leaders helped us whenever there was a need. They helped us to distri pamphlets which were printed in Gujarati, telling the public the whole sch of the nutritional programme. They helped in the survey.

P R O G R A M M E S

Clinics:-

The site of the clinic situated at Khara Tank area was included in t programme and regular clinics were held in only one place i.e. at the Child Care Centre located at Saifee Ambulance, Bombay 3, three imes a week, betwe 2 and 5 p.m. The Medical Officer attends regularly during this time. The Pediatrician attends the centre only once in a week.

Home visits are being made regularly by female social workers. They weigh the children, help the mothers who have lactation failure in preparin milk for babies by adding a proportionale amount of water to powder and advise them about the hygiene. The social workers called on mothers to atte the clinics regularly, for the undernourished children. The social workers g once blue weight chart card to mothers covered in a plastic bag and kept the yellow thin weight chart as a copy in the centre. Some times the blue card was lost by the mothers and at times the plastic covers. The mothers from the poor social economic group and mothers of 'Atrisk' children attend

the Centre very irregularly, and that too after many home visits by the Social workers and medical officers. Thus those who needed help most were not in a position to take the services, even though offered free.

Immunisations.

The immunisation against Polio and riple has been started at the same dlace (Child Care Centre) since the last three years. The immunisation is being regularly done. It is free of charge. Atleast 30 children attend regularly. Arrangements are available for the small-pox and B-C-C. vaccination at the Government run J.J.Hospital, which is hardly half a kilometre from the project area.

There were some difficulties in obtaining Triple vaccines, as Glazo Co stopped producing it from 1976 onwards. At some other time near about centres id dhot have sjtocks of Triple injections. We gave injection Triple to even those children who were partly immunised at other centres because of short supply at those centres. At or Centre there is a medical officer who gives the injections as there is no nurse. The same doctor is also attached to the nutritional programme. During the home visits of the social woekers and the clinic visits of the mothers, immunisations of the children were specially taken care of. At the Centre special care was taken to deal with drop-outs of second and third and boodter doeses of Polio and Triple injections were administered.

Survey and impact on the nutritional status:-

In March 1976 a second survey was done by the Social Workers. They visited about 72 buildings by the end of the month. The population of 5808 having a total of 625 children below 5 years which constitutes about 11.4% of the population has been visited at their homes and the children have been weighed. The nutritional status of the children was as under.

TABLE I

Weight according to Harvard reference.

	Total children	More than 80%	71 to 80%	61 to 70%	51 to 60%	.Below 50%
April 1975	601	251 (41.7%)	265 (44.09%)	82 (13.6%)	11 (1.8%)	2 (.33%)
March 1976	625	317 (50.7%)	194 (31%)	94 (15%)	16 (2.5%)	4 (.64%)

The second survey to find out the improvement in nutritional status is in progress. About 72 buildings have been covered, up and 625 children under 5 year have been weighed in their homes. They have been asked to come to the clinic by the social worker.

For intensive study 55 children who were coming from a poor socio economic condition and having a nutitional status mostly below 65% were taken up. Theyc were visited by the social workers at their homes freqdently and the mothers alsod visited the clinic. This helped the mothers in educating themselve These 55 children were dnvestigated free of charges for routine blood (51), urine (51), stool (51) and X-ray Chest (46). 22 children had severe anemia, 7 had Eosinophilia 12 has Giardiasis and Chronic Dearrhoea, 12 has round worm and whip worm infestation, 4 has rickets, 1 had pathological fracture of Humerus. This figdue of worm infestation is in spite of repeated Deworming.

TABLE II

Change in the nutritional status of severely malnourished children

	Total children	71 to 80%	61 to 70%	51 to 60%	50%
April 1975	55	5	37	11	2
March 1976	55	26	24	4	1

The improvement in the Nutritional status of severely malnourised 55 children has occurred in about 7 months time. Some of the resistant cases of malnutrition were due to Tuining (2) Recurrent diarrhoea (2), severe mental retardation(2), severe attacks of recurrent respiratory infections(2) Tuberculosis (3), Congenital anomalies (4).

Nutritional supplement:

Nutritional supplements are given to children below the age of 5 fyears. The degree and type of nutrition varies according to the age of a child. For infants humanised milk powders are given and also for small and severely malnouris-hed children where there is lactation failure. For older children 'chikie' slabs made of Bengal gram, groundnut and jaggery are distributed. Dewoming of children is done from time to time, and illness are treated with antibiotics.

The Centre has given milk tins and cereal milk tins, each of one pound, tos these 55 children who were poor.

Health education and demonstration-.

In mid December, post-graduate students from Nirmala Niketan conducted five classes in Nutritional and Health Education in Cgildren and Adolesclnts and three lecture demonstrations of preperation of quickly made cheap dishes e.g. 'Arwi Laddus', Sugar coating of Peanuts and vegetable 'Theplas'. These classes were attended by mothers and social science teachers and dwomen and by students from the Taiebiya Girls Hifh School and by the Centre Staff. There was a competition organised among mothers on how to make these taught dished and popularise such new cheap dishes.

Social centres (Health Assistants):

The social workers were well received by the mothers during home visits. The social workers also attempted group discussion in chawls. The workers visited the family who were to be given milk tins. They visited the

the family later to see whether it was well utilised and also helped the mothers in preparing milk under hygienic conditions. Everyd week we have a meeting with the social workers and we regularly discuss their problems and try to find out their solutions.

PROBLEMS:

We had the following difficulties during the year while carrying out the programme:

1. Intertia on th part of the parents, particularly those who needed help most.
2. During the festival period the presence of mo hers goes down every month.
3. The social workers took a little time to understand the programme.

PROJECT ACCOMPLISHMENTS:

1. Continuous integrated health and nutritional care of all under-fives in the project area, irrespective of the nutritional status has been provided.
2. An infra-structure of part time social woekrers has been created, and the problems associated with the planning of integrated health and nutritional services has been studied.
3. Nutritional health education in relation to the social background of malnutrition is given through the clinics and at homes and it has become a project element.
4. All under-fives in the project areas have been classified in relation to the Harvard standard, and those weighing 65% or less, and who are from poor families, have been given nutritional supplements including milk powder tins.
5. Immunisation against infectious diseases has been undertaken.
6. An awareness of the significance of weight per age has been created, even in orthodox and illiterate families.
7. The Nutritional and immunisational status of children has improved, and thus the image of the workers of the centre and also of the centre has improved.

8. The many problems of the day to day implementation of the project programme are being studied.

9. One of the dictums of Healthy child better Nation of the sponsoring Trust is in the process of achivement-

OUR URTURE:

1. To arise the nutritional standard of children and thus help thenation in building up her citizens to be stronger.

2. While raising the physical health, mental development is greatly helped in a developing individual.

3. To gain experience by working out this project in an urban area, and to help other areas of the cities by giving its experience and other help to Veer Jijamata Nagar, a slum area of Worli.

NUTRITION REHABILITATION CENTRE,

APEX TRAINING INSTITUTE(ANP)

AND

VILLAGE CHILD CARE CENTRES.

Government Erskine Hospital
Madurai 20 - South India.

HONORARY DIRECTOR

Padmashri Dr.VENKATASWAMY,BA,MBBS,MS,DO,FAMS.

ADMINISTRATIVE OFFICER

Dr. S.A. KABIR, MBBS,DA(LON),FFARCS (ENG).

ANNUAL REPORT

NUTRITION REHABILITATION CENTRE & VILLAGE CHILD CARE CENTRES - 1975

INTRODUCTION: In October 1969, at the World Assembly of the world Council for the welfare of the welfare of the blind, held in New Delhi, a paper on "Malnutritional Blindness in Asia, Africa and South America" was read by Dr. G.Venkataswamy, Eye Surgeon, Government Erskine Hospital, Madurai. With the help of Sir John Wilson, Director of the Royal Commonwealth Society for the Blind, United Kingdon, after an inspection of and study by Dr. Antoinette Pairie, Professor of Biochemistry, University of Oxford, a report of incidence of Keratomalacia was ubmitted by Dr. Pirie. This report of Dr. Pirie was sent to various Paediatricians and Ophtalmologists including Sir Edward Duke Elder for their opinion. On their approval steps were initiated for starting a Nutrition Rehabilitation Centre (N.R.C.) on a Pilot basis, at the Government Erskine Hospital, Maddurai, on the 14th January 1971 with the following objectives and with Dr. G.Venkataswamy, (Now Padmashri) Professor of Ophthalmology, as Director.

1. to decide on a proper low cost nutritive diet to cure early malnutrition and malnutritional eye diseases.
2. to obtain knowledge which will be in valuable in starting s milar nutrition centres in villages.
3. to build up this centre into a teaching and training institutions for basic workers, medical, para medical and those of the Education Agricul departments.

Location: This centren has been located at Erskine Hospital as it provides easy selection of cases from the Department of Paediatric Medicine and Ophthalmology. Better care,followup, and evaluation by senior and oriented staff is easily available and advantageous. This is an unique feature.

Accommodation: The centre has as present 20 single room houses, eleven of which are occupied by the office, kitchen, stores, laboratory, etc. 5 are for lodging the trainees and four accommodate about 6 monthers and children.

There are two thatched sheds with cement floorings, one for use as a dining hall and the other for holding classes for the trainees, etc. Electricity has been provided and there is a provision for toilets and a bath separately for the trainees and patients and their attendants.

The staff consists of a Honorary Director, Administrative Officer, two part time Medical Officers (Ophtdhalmologist and Paediatrician), one Nutritionist, One Cook, One Helper (Woman) and one Sweeper(Woman). The salary paid to the staff as is Rs.40,800/- per year.

Work done at the centre: Malnutritional children Grade II & III in the age group of 1 to 5 years with no eye involvement and dll children with Vitamin A difficiency with or without malnutrition, are selected in the Ophthalmology and Medical Paediatric Departments of the Erskine Hospital. They are admitted to the Nutrition Rehabil--itation Centre. On admission a clinical photograph is taken and Road to Health Card completed after examining every patient. In case where hospitalisation is indicated the children are admitted to the Medical Paediatric Department or other departments. All cases of Night Blindness, Biot spots and Conjuctival Xerosis are treated purely with simple diets like greens, vegetables, papaya, without involvement of animal proteins.

We have admitted and treated a total number of 1184 children and 279 cases for this year 1975 alone. The total no. of children with Xerophthalmia is 941 (79.4%) and the total no. of children admitted with PCM without Xerophthalmia is 243 (20.6%). Vide Appendix I for details.

Training: We impart training to the High School Girls selected from villages, where 146 village child care centres schemes are on. This centre has been designated as an Apex Institute for training all Government servants under the Applied Nutrition Programme, from Personal Assistants and Collectors down to mahalirmandram leaders. We are busy teaching the mothers etc. all round the year. The highlights of this year's training programme are:-

1. The training programme undertaken for the WHO'UNCEF team of experts from Developing countries lead by Dr. Ibrahim of the Child Health Institute, London in October 1975.

2. The training of Medical Iternees from the Maddurai Medical College, Madurai.

3. The orientation course for High School Girls in the 9th, 10th & 11th standards of two schools chosen, one at Thiruppuvanam in Ramnad District and one at Madurai itself.

4. Training Balasevikas deputed by Tea Estates and Private organisati ons. Sve Appendix II for details of training given.

Teaching Work: It keeps the Nutrition Rehabilitation Centre busys round the year. We make the teaching programme for the students of the colleges and slchools for one hour with posters, slides, etc. and at the end, show educative films on the hazards of malnutrition and malnutritional eye diseases, with emphasis on how to combat them. The films run for a total of 40 minutes.

Home since students of the local colleges attend our centre once a term. We offered a syllabus and a curriculuam for vocational training for girls in the 9th, 10th& 11th standards. In G.O.Ms. No.1690 Edn. dated 7.10.75 the Government of Tamil Nadu has sanctioned the intkoductions of "Nutrition and Hygiene"

Course in two High Schools, one in Madurai and the other in Thiruppuvanam, Ramnad District, and has also provided the necessary staff for the purpose. The course for the High School Girls has started and is expected to be completed in March 1976 for this academic year.

VILLAGE CHILD CARE CENTRES

With the experience gained through the work at the Nutrition Rehabilitation Centre and encouraging results in the treatment of malnutritional eye defects and malnourished children under five with low cost locally available (without animal protein) food, a scheme for the establishment of such 100 village child care centre schemes with the approval of the Government of Tamil Nadu was int-roduced in two blocks in the Madurai District in the year 1972. The Associated Country Women of the World through the Royal Commonwealth Society for the Blind, London, provided funds initially for the 46 villages child care centre schemes in Thiruppuvanam Block, Ramnad District. Later, the Government of Tamil Nadu involved itself in the Thiruppuvanam feeding demonstration programmes except the maintenance of Balasevikas and the provision of a van with to driver in the 46 village schemes. This rural oriented nutrition rehabilitation programme is result based and time bound. It also provided for simple specified remedies for day to day illnesses. Apart from the fact that this provides essential and needed curative service to the children, it also educates the mothers on Nutrition, Child Care and Clean habits.

A. In short, our objectives at the village child care centres are:

1. To educate mothers on the proper nutrition of preschool children by feeding demonstrations
2. To provide treatment for common illnesses of children by trained Child Care workers under the guidance of Doctors.
3. Full immunisation of all the children
4. Having a target to bring down the mortality and morbidity rate within a specified period.

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B The staff sanctioned for the villages' programme is as follows:

Details of staff	100 Villages	46 Villages
Tutor(Paediatrics)	1	1
Nutritionist	1	-
Public Health Nurse	1	1
Junior Assistant	1	-
Driver	1	1(ACWW)
Balasevikas	12	12(ACWW)

C. The total No. of villages covered so far is 40 in number and we are maintaining 21 centres at present.

D. The total No. of cases treated and the classification of malnutrition diseases are given in the appendix.

VILLAGE HEALTH WORKER: A new angle of the training programme has been to train Village Health Workers under the leadership of Dr.Sheila Zurbrigg from Canada and or Nutrition Rehabilitation Centre Staff. We have trained 4 middle aged women chosen by the villagers, and the programme is under implementation. Thanks to the munificent help given by the Associated Country women of the World, United Kingdon, for this scheme. The Village Health Worker will be especially responsible for the curative healthd measures of children and expectant and lactating mothers, Family Planning, Health Surveillance and environmental sanitation.

LIBRARY: AND EDUCATIONAL AIDS: We have acquired a number of publications by means of donations from Christophel Blindlen mission, West Germany, and through purchase, and this is being strengthened day by day.

2. We have made two films and one more is being edited.

3. We have made and also acquired a considerable number of slides and have a slide projector.

4. We have published and are publishing pamphlets in Tamil on topics like:

a) [illegible]

b) [illegible] Article

c) [illegible] B

a) 'Antenatal Care'
b) 'When Baby Arrives'
c) After Baby is Born'
d) 'Food and Nutrition'
e) 'Malnutritional Diseases'

5. We have made 16 posters in collaboration with the the Applied Nutrition programme and on our own, and another 11 posters about Food and Nutriton. These are distribsuted to the villages, schools and solleges and like minded crganizations.
6. An educational calendar was published in January this year.
7. Cinema slides.
8. We prepare monthly bulleting on Nutrition Education in dollaboration with the applied Nutrition Programme, Kallupatti training School.

BIO-CHEMICAL LABORATORY: Thanks for the help give by our Director, Padmashri Dr. G.Genkataswamy, who has a set apart a large room in the new Ophtalmic Block of the Government Erskine Hospital, Madurai, for starting a laboratory to carry out professor of bio-chemistry, Oxford University, from 9.1.76 with the financial help of the World Health Organisation.

PROPAGANDA: Every village where we have a child care centre and some villages as well, where don't have Child Care Centres, we do education pkropaganda on Nutrition andsdquelae of malmitrition, with posters, slides, films, etc. The attention is now on the mothers' education and on the education of the village school children. The same propaganda and talks were carried out to all the mills, police establishments, transport establishments, etc.

We chose a slum and, with the public cooperation, got freeà electricity to carry out a nutrition education and favourable propaganda. Propaganda is being continued and we have applied for the grant of a mini bus for this purpose from the B.C.Roy Memorial Committee, New Delhi, and we are awaiting its decision. Thw UNICEF may also help us by providing a projector, sound system etc.

We have also participated in the exhibitions (seminars) organised by the village Panchayats in the following villages:
1. Palamedu, 2. Alangamallur 3. Vaddipatti and Thirunagar.

KITCHEN GARDEN: The kitchen garden we started in 1974 has so far yielded a revenue of Rs. 550/- and this amount is being kept in reserved to meet the expenses towards inputs like books, etc. We are self-sufficient in greens, partly in vegetables, and have an abundance of papaya this year.

BUDGET: The daily cost of running the Nutrition Rehabilitation centre is Rs.166.66/- per day, involving overheads. Each child costs on an average Rs. 240/- The expenditure for the year for the various schemes is as follows:

1. Nutrition Rehabilitation Centre (R.C.S.B.Funds) Rs. 53,853/-
2. Village child Care Centres (A.C.W.W.Funds) Rs.36,083
3. Village Child care Centres (Funds provided by TN.Govt.)Rs.2,73,000/-

FOLLOW-UP OF CASES: The follow-up had been for only 325 cases treated in the Nutrition Rehabilitation Centre and the house visits programme had to be given up in 1974, due to the cost of petrol, and our N.R.C budget could not meet it. The study of the follow-up cases reveals the effect of nutrition education on mothers.

Taking the worst affected hildren in Grade III malnutrition, 90 mothers out of 247 (36%) have positively benefitted, as shown by the Grade, Improvement in children.

Of the 63 mothers who came with Grade II children, 16 (25%) have positively done well, 43 (66%) have at least maintained the Grade and 4(6%) have failed.

Of the 12 mothers with Grade I children, 2 (16%) have failed and 10 (84%) have maintained the Grade.

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328, V Main, I Block
Koramangala
Bangalore-560034
India

Of the 3 mothers with Normal children, 1(33.33%) has failed and 2 (66.66%) have maintained the Grade. That is, to sum up, 106 mothers have positively benefitted out of 325, -32% 212 mothers- 64% could be said to have partially benefitted,d as they have managed to maintain their children iin the original grade, 7,-4% have failed.

In spite of the greater difficulties involved in her selection. training and supervision, the "VHW" - "Village Health Worker",as an agent of health care, offers 3 very significant advantages:

1. She is a permanent agent for curative care at the village level.
2. Because she understands more closely he traditional beldiefs of the community and is already trusted by them, she is a more effective agent of change.
3. Shw acts as a permanent forus for community awareness of and of and commitment to improved health care.

In the Madurai Programme the "VHW" is the continuing phase of the original Balasevika Child Care Programme, being trained during the Balasevika's stay, after the initial awakening of the community's interest in nutrition and Child Care is done by the Balasevika. Some villages however, are to be cholsen for the "VHW" programme "denove" to assess whether in fact the Balasevika and the demonstration Feeding Programme Phase are essential for the initiation of successful "VHW" work.

OBJECTIVES FOR VHW PROGRAMME:

A. Sapecific Health Objectives:

1. MCH
   - Nutrition Health Education and Propaganda
   - Simple curative care (initally only for under 5's) and appropriate referral to more competent health personnel.
   - Preventive care:
     i) Motivation and organisation for Immunisation.
     ii) Nutrition surveillance of all under 5's from birth, using Road-to-Health Card

- Antental, maternity, postnatal and lactation care, and appropriate referral
- Family spacing and limiting

2. General - Identification of all cases of T.B.and Leprosy through screening camps(by supervisory them + PHC staff with direct supervision of regular on-going treatment by VHW) -Minor Medical Aid to the adult population.

B. Community Development

This is achieved by a do-ordination of specific health work with community needs such as clean and adequate water supply, kitchen garden techniques etc. all of which will directly or indirectly effect the well-being and health of the community.

C. Community Participation in the Health Programme:

This is facilitated by the establishment of dpermanent village health related projects, including the VHW's work, and related projects, and committed financially to covering at least the expenses of drugs and basic equipment, if not in time the VHW's salary as well.

METHODS:

The kepy to the success of the programme is the selection of the right woman to be the village VHW 'Right' in the various senses of being trusted and respected in the entire community, being bright land motivated to do such work, willing and able to enter the homes of every section of the community and having sufficient time and support from her family for such a demanding work. Because hermsalary will be very modest, she will have to have some sense of community responsibiiy to accept the full duties and demands made of her.

So far her selection has been made primarily on the basis of the opinions of the village mothers themselves, along with suggestions from the Balasevika. It seems essential that the opinion of the community must be sensitively and wisely sought in her selection, to ensure her identification wide and commitment to the programme.In fact, in our experience, it is the mothers themselves, who can best identify the most trusted and energetic woman among them.

Formal education and literacy would certainly facilitate her training and record keeping, but often the woman most widely supported by the community may not be literate. Because it seems that the above considerations are ven more essential than her literacy, we are evolving a training and village programme aroung the inevitable fact of illiteracy.

The experience of Drs.Arole, with their VHW work in Maharashtra, has proved that the VHW does not indeed need to be literate to be capable of providing good community health care.

Many of the women selected have been the indigenous dais of their villages. Though thedais are usually illiterate, it does ensure that they have already assumed some type of health care role in the community, so that involving them in general child Care is only a natural extension of their work.

B. Training:

The principle of VHW training being followed is that it must be continous and cummulative. Being wives and mothers themselves, they cannot be expected to be away from their homes for a long period of training. Instead, an initial 2 weeks' introduction is given to them at the Nutrition Rehabilitation Centre, with regular monthly 3 day refresher and further teaching sessions to continue on a permanent basis.

Training is mainly oral and pictorial with practical demonstrations in the N.R.C., and O.P. Departments and wards of the General Hospital.

Though 2 weeks is a very short period for even an introduction to the many aspects of comprehensive child and community care, it has been found that with the facilities for practical demonstrations of at the Nutrition Rehabukutation Centre and adjacent hospital wards and O.Ps training can be intensive and effective within such a short period.

C. Supervision:

She is supervised weekly by the existing hild Care Centre terms of Medical Officers and Assistants. As the programme expends, however, to potentially ald the villages in the blocks, co-ordination and supervision will have to come in part from the PHC staff as well, particularly from the Lady Health Visitors and ANMS

The ultimate goal of the programme is to develop a model of effective village levels rural health care extension by means of "village Health Workers" and integrating this into the existing Government rural health care pattern.

The State Government is already sponsoring the village Child Care Centre Programme, If the VHW project proves successful, the application by the Government on a broader scale will be a logical extension of the work.

A detailed proposal has been written for setting up such PHC co-ordination of VHW supervision.

D. Community Involvement:

Active community support of this programme is essential for several reasons. If the aprogramme is to be feasible financially on the board scale of each village in the State or Country having a VHW, then even her modest salary of Rs. 50/- per month as well as drug expenditure of approximately Rs. 75/- per month will be a large burden on the Government, and support will have to come as well from the blocks and villages themselves.

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Bangalore-560034
India

More important even than this, however, is the consideration that, if the community is committed to supporting at least in part the VHW this commitment reflects and reinforces its appreciation of and involvement in the programme, and transforms the service from a government "dole-out" to a programme which it has a hand in shaping and determining.

The Balasevika child care centre programme has awakened interest in most of the villages to the extent that they are willing to provide medicines, equipment and often a partical salary, especially in the "Surplus" blocks. This commitment is in fact, insisted upon from the beginning, before any village is selected for the VHW programme.

E. Assessment:

From the Child Care Centre experience to date, realistic targets have been worked out for improving the general health of the villagers. The specific goals are as follows:

I. CHILD HEALTH:

i) Nutrition status of children under 5 years Maintenance of improvement achived through the Balasevika feeding programme, that is: Children in Grades III & IV malnutrition to be Reduced by 67%.

Children in Grade I or Standard to be increased by 100%.

The Balasevika has achieved this nutrition improvement within one year to a large degree by the acltual feeding programme. It is estimated that the VHW's working in villages withsut theà Balasevika programme proceeding will relquire 2 years to achieve these same nutrition results with her less immediate tools of education and curative care.

ii) Infant mortality: Now estimated at 100 per 1000 lives births has to be reduced by 40% to 60 per 1000 L.B.S.

iii) Toddler mortality: estimated now to be approximately 60 per 1000 L.B's has to be reduced by 50% to 30 per 1000 L.B 's.

iv) Immunisation coverage:

SP	100%	
BCG	90%	Dependent unfortunately on availability of vaccines.
DPT	70%	
POLIO	70%	

II. CHANGES IN THE SPECIFIC CHILD FEEDING PRACTICES:

for example: age of supplementation of breast feeding, frequency of feeding "greens": use of groundnut cake, etc.

III. MATERNAL CARE:

i) ante-natal tetanus toxoid coverage

ii) Maternal mortality rate

iii) Prematurity rate

(to be assessed indirectly by the average birth weight.)

IV. FAMILY PLANNING

i) percentage of eligible couples protected, initially & yearly

ii) birth rate.

V. LEPROSY =. T.B.

a) prevalence of active cases of Leprosy, T.B.

b) percentage known cases of Leprosy, T.B. regularly under treatment.

SUMMARY:

The concept of the 'Village Health Worker' is not new. The reality of village level workers with a minimum of training being the only solution to the problem of extending health care to rural India in the immediate and even more distant future has been recognised by many, including the central Government Health Planning Officials.*

The actuality of such a programme, able to provide the correct selection, on going training nd supervision of these VHW's all in such a way which is feasible on a vast scale, has yet to be accomplished.

One of the most crucial factors (if not the most) in successful implementation is establishing the motivation, interest and active support of the village communities themselves. In the Madurai project such interest and commitment to the VHW programme has come from the initial 8 to 12 months' intensive nutrition and child care work done by the Balasevika. Whether it will be possible to establish such community interest without her initial efforts remains yet o be established. If so, this will simplify somewhat the programme in applying it on a board scale. It is encouraging to note that since beginning he programme in December 1975, a number of other villages without the alasevika-Irun child care centres, have already enthusiastically requested that th y be included in the VHW programme.

Though still in its early stages, the VHW extension of the Maddrai Village Child Care Programme is a promising model for providing basic health care tos the rurald areas.

VI

R U R A L H E A L T H P R O J E C T,

N O R T H A L I B A G , T A L U K A.

(THE FOUNDATION FOR RESEARCH IN COMMUNITY HEALTH)

Project Director: Dr. N.H. ANTIA,
Professor of Plastic Surgery,
Grant Medical College &
J.J. Group of Hospitals,
BOMBAY.

BY

Mrs. SRILATA BATLIWALA
Mr.Mrs. A.MUKHARJEE.

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P H I L O S O P H Y

Every human endeavour must have a strong philosophical base, a structure composed of ideals, vision, and human values. Thus when we entered the field of rural health and development,d we adopted the basic promise that has characterised the new thinking in recent years, that participation of the people in their own development, their involvement as participants and not objects of various programmes, is the only real index of development

However, it has never been clearly defined whether participation of the people is the lultimate goal and product of development,dr lwhether it is merely a force to be harnessed in the process of development. We believe that it is both these akspects that constitute development. Taher Therefore, when our lproject irst lbegan its work in Mandwa, our primary emphasis was on involving the community in the planning and implementation of the various programmes for health services, with the overall objectives of making the community responsible for its own health and health services.

But to achieve this objective implies the generation of a capacity for organisation in the community. After centuries of poverty, and an outlook that expected little and demanded nothing, there is practically no ability to become dynamic initiators of change in our lpepole. The process of stimulating this ability is mainly educative, and we term it social education. However, our soc al education programme is two fold in its objectives, health education, and education for participation. The former is essential to change current community attitudes regarding heallth standards and practices, and the caustion of disease. Thellatter aims at increasing the organisation capacity of the group, and its ability to seek solutions to common problems. In other words, the entire process is intended to create socially conceious citizens.

In summary it may be said that we believe that the lhuman spirit is the greatest and most powerful force in making, and when it is harnessed, there are few handicaps that cannot be overcome, and few goals that cannot be achieved.

O B J E C T I V E S

Our primary objective, as stated earlier, is to enlist the involvement and participation of the people in every one of our programmes, not only in health services, but also for community orlganisation and socio-economic development. The functional expression of this philosophy lies in the use of the village Health worker(VHW). This is a simple woman from the village, trained and suspervised by us, who forms the keystome of our health programme. She is also the token of he community's participation, since she is partly paid by the Gram Panchayat of her village.It is hoped that this sponsorship will begin he process of participation, since the act of investing in such a worker would automatically make the village responsible for seeing that the executes her functions properly. The VHW is trained to dispense simple drugs for minor aliments, conduct some minor health education and through the medum of home-visits, identify cases for ante-natal care, malnutrition, T.B. and Leprosy.

Secondly, we wish to develop a model rural health scheme in a typically underserviced area - with the overall goal that this model should be practival, feasible, and above all, replicable. On the one hand, this entails proving that an efficient and successful health service can be manned and run primarily by paramedical and auzilliary personnel, with minimum doctors. In an underdeveloped country like India, we simply do not have the resource to place the doctor at the foundation of the health service. Even if we could, it has been seen that such highly qualified professionals are very reluctant to practice under the primitive conditions of a rural area, where the greatest need lies. On the other hand, we hope too show that no matter how sophisticated th service, it is only when the community is made reksponsible for its health, that positive results can be achived.

Thirdly, we wish o evolve an efficient delivery system for both preventive and curative health care, with particular emphasis on the preventive approach, which again, is most suitable for Indian conditbons and disease patterns.

But since the mere delivery of health services, without a change

of attitude and health practices on he part of the people is almost self.negating, health education became our fourth objective. Health Education programmes are conducted hrough the Mahila Mandals, by VHW's and through Youth Clubs. We hope gradually to involve the schools teachers as well in his effort.

Finally, and perhaps this is the essence of the problem in its larger dimension, we realised that health is both a cause and product of the general economic condition of the people - it cannot be tackled in isolation environmental condition, sanitation, water supply and waste disposal adequate nutrition, and a means of dlivelihood. Thus we have begun to enter the vast and sometimes, flrightening field of socio-economic development through a series of programmes aimed at raising the standard of aloving of the most poverty-striken and landless and in improving the environomental conditions which directly affect health. We believe that the only lasting and meaningful change in the health of the people will derive from this source.

The project commenced in April 1973 in the North Alibag Taluka,which consisits of 30 villages with a population of about 30,000 inhabitants.Most of them are agricultdrists belonging to the Agri community. There are also fishermen in the coastal villages. Due to stringent ekonomic conditions every family is forced to send at least one member to Bombay City to supplement the family income through gainful employment in the city.

Arable land in this talukd is limited due to the hilly terrain.d and the high salinity of marshy lands adjoining the creeks. A subsidiary source of dlocal income for several inhabitants is the maintenance of a few buffaloes and poultry. There are several large poultry farms and at least large diary in the region. However, these re, almost without exception in the hands of wealthy enterpreneurs from outside the areas. A few small scale industries such as a pen factory, rope-making industry, etc., provide employment to the youth, but the pay scales are poor (about Rs. 2.50 daily) and the employment conditions are ustable.

Th re is one main highway running longitudually through the Taluka and several unpaved roads joining the villages to this highway. A fairly good State Transport bus service connects the villages to the District Head-quarters of Alibag, 11 miles away frodn the project area. A launch sdrvice connects the area to Bombay City.

7 miles away, from h jetty of Revas and operates 7 months of the year. but not during he monsoon months. A new jetty has been constructed at Mandwa. It may be able to handle bigger all weather boats.

OUR PROGRAMMES

PHASE I - THE FIRST YEAR:

This was a time of learning, planning, and establishing a support with ahe community wh re we wished to work. A social worker was appointed who began the delicate task of interpreting to the people our aims and objectives, of gaining their confidence and the support of the Panchayat Samitis and Zilla parishad officials. The most difficult task was to discourage the coventional notion of welfare agiencies being on stitutions of charity, and to promote the concept of development with participation in which we believed. The idea of one of the villagers be capable of dispensing treatment gained slow acceptance.

Further, the first year was spent in conducting a baseline survey, which was carried out by the Tata Institute of Social Science. The date found in this survey have given us some important clues regarding the areas which need the most intensive work. Simultaneously, a site was chosen for the building of lthe primary Health Unit which we planned to construct, vehicles were arranged on loan, project personnal were recruited, plans for construction were drawn up.. it was a time of preparations.

PHASE II - THE HEALTH SERVICES:

THE VILLAGE HEALTH WORKER: The concept of the VHW as a medical intermediary, capable of providing curative service of or minor ailments as well as preventive services was not an easily accepted one on the part of the villagers. The decision therefore, to have the GraM Panchayat sponson a worker gained her for greater acceptance. Two Training Programmes for the Health Workers were conducted in 1974, the curriculum included imparting some basic knowledge of anatomy and physiology, nutrition and food habits, some knowledge of gynaecology and obstetrics, pre- and post-natal care, common ailments, their causes and treatment, and first aid. There are now 30 VHW's functioning.

The main function of the health workers is to undertake home visits for 3 hours a day. During the visits, the worker is expected to make the following observations:

1. Number of children under 5 years of age
2. Whether the above have been vaccinated.
3. Any health problems among the under-fives such as malnutrition.
4. Any ante-natal cases in the home.
5. Any member of the amily with prolonged fever or cough, (T.B.)
6. Any person with depigmented patches, (Leprosy).

Apart from these observations, he worker should treat minor ailments (for which they carry a few drugs), any difficult cases are referred to the ANM or the health Centre doctor. In addition, the VHW is the major tool for health education, during he home visit the counsels the women of the house on nutrition, cleanliness, causation of diseases and so on.

Immunisation: This has been one of our most successful programmes. Thus far, nearly 70% of the childrend have been covered by Triple Antigen, 40% by BGG and 100% by Small Pox vaccinations. Triple Antigen is the only vaccine that has been administrered by our own AMN's, Small Pox has been given by the local PHC vaccinator,d and BCG by a T.B. technician from Alibag. Particularly for Triple, the percentage returning for the second is encouragingly high - 80%.

C URATIVE SERVICES THROUGH THE OPD's: OPD's are conducted in five villages centres by our project doctor, on one day of the week elch. At other times, basic medical services are administered by the VHW or Auxillary Nurse Midwife (ANM). The average attendance at the OPD's is approximately 550 persons per fortnight.

T.B- AND LEPROSY CONTROL: A number of T.B. and leprosy cases are being treated by our project staff. The home visits of the VHW have been particularly useful in detecting new cases of both diseases. In this

context, the greatest obstacle is the refusal of the patient to take regular treatment, and to continue treatment for the full period. However, we have been quite successful in that about 80% of T.B. positive cases are receiving regular treatment, and a number of frop-out cases have been reprecruited. This is a much higher percentage than the national average, and is a reflection of the ready availability of the services. Out basic approach is that of early detection and continuous follow-up, as well as health education aimed at importing a scientific understanding of the various aspects of the diseases.

Numbers being treated : 49 - Lepresy, 73 : T.B.

ANTE-NATAL AND UNDER-FIVE CARE: After the programme of home visits by health workers was initiated, the detection of and careà given to ante-datal cases has increased manifold. 50% of all expectant mothers have been covered with ante-natald care, and we hope eventually to increase to 100%. Further, 25% of all deliveries are being conducted in our PHU, and we wish to raise this to 50%. But this apart, local dais are being educated in more hygienic modes of delivery such as sterlising scissors, and to call the ANM during the delivery in case of co-mplications.

The ante-natal service consists of regular medical check-ups of the pregnant women by the ANM's immunisation against tetanus, treatment of defeciencies, if any (such as anemia), and counseling about diet and other aspects.

Regarding the under-fives, many malnourished children have been detected through the home visits of the VHW. But apart from this, and since we realised he problems was severe, a Nutritional survey was conducted by the Government of Maharashtra Nutritional Survey Team in 3 samplec villages. The results of the survey were staggering: Only 4.7% children were normal, whereas 15.2% had Grade I, 56.4% Grade II, 23.7% Grade III Malnutrition. The needy for an intensive nutrition are being given milk, soya-reinforced bulk and cereals on a daily basis.

Further, he care of all malnourished children is supervised through the VHW and ANM who regularly visit their homes, guide the mothers on how

best to reorganise their diet, administer direct treatment for various vitamin deficiencies. The monthly progress of these children is recorded on an Under-Five Card to help us evaluate the efficiency of the treatment but this has not proved very successful, so we hope the Nutrition programmes be more effective.

FAMILY PLANNING: We deliberately held back our family planning programmes until a time when our bonaffides had been established, and our health care programme efficiently functioning and accepted by the people. Now, we have gradually begun to identify eligible couples through the home visits, and thus far we are performing roughly 20 tubectomics per month is in our Primary Health Unit.

COMMUNITY ORGANISATION PROGRAMMES

In reality, almost all our programmes involve community organisation since citizen participation in its essence is impossible without organising community. But the main programmes that we consider to be strictly community organisation oriented are the health education and health insurance schemes since these involved specific functioning through organised bodies from the community.

HEALTH EDUCATION: Numerous experiments in health education were tried before deciding on any one approach. Earlier, the ANM's conducted simple programmes in primary schools on common subjects like cleanliness, disease and prevention, etc.

But later it was realised that health education could have a two-fold objectives:(1) to increase awareness regarding the causation for discease and its prevention, bringing about permanent attitudinal changes in the community regarding health standard and practices, and 2) to develop local initiative and participation.

Women, as the guardians of family health, and school children, form the two major target group discussion among the women on susjects like nutrition, ante-natal care, child care, common diseases, their cause and prevention. The young people are reached through the formation youth clubs and health clubs. These clubs not only provide health education, but outlets for energy and useful activity. The Shirali village Youth Club sponsored a village Health Worker. The conceipt of home visits further enhanced the process of education a personal, one-to-one experience, with first-hand knowledge and implication for the home and family.

HEALTH INSURANCE SCHEME: In one of our most interesting and successful experiments, the village of Mankule, Narangichatep and Bahirichaoda participated in a Health Insurance scheme. The contribution of Rs. 2/- per head was expected to cover the costs of the scheme for a period of 6 months, but since the expenses were slightly in excess of that expected (due to the monsoon case-load), so the programme ran for 3 months from 1st July - 30 the September, 1975. A Health Committee was set up with representatives from the village to look the running and finances of the scheme

Using the Gram Panchayat office as the clinic and residence of the ANM well over 2000 patients were treated, most of them being cases of gastrp-enterities and dehydration. 20 fresh T.B. cases were detected and all deliveries were covered by the ANM.

Due to the heavy monsoon, there was a heavy case-load, so that curative services were given major emphasis. But it is significant that of this the ANM was well able to handle all the cases bar two of poisoning, and was also able to train a dai and supervised the work of VHM's. In spite of the many difficulties faced, roads obscured by the rains and broken communications, he programme did extremely well and is considered one of our most successful efforts. We now hope that dmore villages will express inderest in having similar schemes.

SOCIO - ECONOMIC PROGRAMMES

TRIBAL PROGRAMMES: Initially, the project had not considered any direct economic programmes for the tribals as a group, but we have been called upon by the Sural Gram Panchayat to treat 49 tribal families for scabies, as the entire group was infected by this disease. During the course of this programme, it was increasingly clear to us that health care alone could not be a priority for this community who were totally proverty striken. Further investigation revealed that this group had been given land by the Government, but they had neither cleared the land nor cultivated it due to complete lack of organisation or funds. We felt that settlement on the land would provide the key to economic self sufficiency for these people and thus undertaking the work with the co-operation of the Government and the tribal families. The Government under the Employment Guarantee Schemes earmarked Rs.20,000/- for the work of levelling the land and preparing plots for cultivation. But unfortunately, the actual earnings under the scheme amounted to less than Rs.1/- per day so our project

has undertaken subsidising of the daily income, organising the work, linking with the Government agencies and undertaking programmes for the social development of this group.

This has been a particularly difficult task as the tribals are essentially a nomadic group with no history of concerted or goaloriented behaviour. The changeover from this piecemeal existence to a more consistent one has therefore had many cultural implications. Half the task lies in instilling a sense of self-discepline in the people.

Despite these handicaps, however, ten acres of land were cultivated and first crop has already been harvested, withs enough vield to take and see through the next four months. As further clearing of land takes place more and more land will come under cultivation. This programme has been a significant landmark in the economic progress of the tribal population in our area.

CONSTRUCTION OF DWELLINGS: Housing is another great problem for the tribals. Several welfare agencies have been approached to provide materials, labour and off-for-work schemes in order that huts,schools land other dwellings may be built.

BALWADIS: In jirad village, a balwadi has been started on a voluntary basis. The balwadi is run in formally, under th trees by 2 school boys from the local youth club, who have undertaken this out of a spirit of dedication without payment.

MANKULE DYKE: The villages of Mankule, Narangichatep and Bahirichapada were continually afflicted by chronic flooding of land where the paddy crop is grown. This is caused by the seeping of the water from the nereby creek, and results in great damage to the land which becomes salinated and infertile. The only solution was to repair and strengten the dyke already there and protect the fields from the creek water. The leaders of the villages approached the project personnel for help and it was given. Funds were secured for a food-for-work scheme. The work is now under way and has served to provide jobs for the landless labourers.

We hope to undertake more such food-for-work schemes in the future, and this is not only an aid to developing area but also provides employment and susteance to those in need.

FUTURE PROGRAMMES

1. A project of a very similar type is going to be started in Uran Taluka with the same bread objectives and methods with one important difference, the project will use the existent Government established infra-structure. This is a significant experiment as we intent to re-tain and re-orient the present Government staff in our philosophy and ways of working.

The proposal for handling over the Government structure to the Foundation for Research in C mmunity Health has already been sanctioned by the Zilla Parishad. We have now begun to recruit personnel for the project in Uran.

The only significant departure from our Mandwa project will be in that the Government-trained 'Uni-purpose Workers' will be converted into Multi-purpose workers. These workers will then undertake all basic health activities in the area, and not restrict themselves to one role (vaccinator, T.B., technician etc.,) as before.

2. A sanitation programme is being prepared with the tecnhical assistance of CPHERI (Central Public Health Engineering Research Institute). A complete picture of how best this programme may be planned and executed will emerge with the finilazation of the technical report. The community has already come forward with its contribution for undertaking this programme, and other agencies have also been approached for additional funds. We hope to utilise several cost-effective methods of sanitation that have been developed in recent years.

3. One of our most important future programmes is a plan to enhance the scope of our project to project dynamic economic measures, Health is always a direact result of the standard of living of the people, and economic stagnation can successfully negate even the most comprehensive health care. Therefore, programmes for introducing alternative

technology methods to optimise the profitability of any given economic activity is the need of the day. These new tech-nologies are highly innovative, and ingenicus, so that even by following the same occupat-ion, people may live a better life.

4. The problems of the tribals are going to be dealt with in a more concerted manner, and will include the development of agriculture, water resources, housing and educational facilities.

We stated earlier that one of our objectives was to prove that service like ours could be duplicated since it was based on certain sound principles. It is interesting to note, therefore, that the delivery system for health must be changed, and that the focus should be the grassroots organisation as the centre, and not the opposite. The REPORT OF THE GROUP ON MEDICAL EDUCATION AND SUPPORT MANPOWER,(Dr. J.B. Shrivastav Chairman) published by the Ministry of Health and family planning, 1975 state that clearly that the health model used so far in India has been inappropriate, expensive and unsuccessful to a greatextent. At also recommends the use of multipurpose basic health workers with a short, low cost training to man the health service at the village level. Further the committee recognised the importance of the involvement of the individual and community in their own health programmes, without which most services are importent.

VII

THE KASA MODEL

INTEGRATED MOTHER-CHILD HEALTH-NUTRITION PROJECT

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Sponsors :

The Government of India, The Government of Maharashtra and CARE - MAHARASHTRA.

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Administrated by:

CARE- MAHARASHTRA

...

(Hon.) Project Director (Technical) : Dr. P. M. Shah

Professor of Pediatrics, Institute of Child-Health, J.J. Group of Hospitals and Grant Medical College, B O M B A Y.

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The status report is in two parts. The first part is the outline of the project which describes what was proposed and second part is the status as of March 31, 1976 of some of the key elements of the Project.

COMMUNITY HEALTH CELL
326, V Main, I Block
Koramangala
Bangalore-560034
India

OUTLINES OF THE PROJECT

1. **Title :** The Kasa Integrated Mother-Child Health Nutrition Project.

2. **Purpose :** To develop an economical system for delivering integrated health and nutrition services to mothers and young children throughout rural Maharashtra, in which existing health-nutrition services/programs/personnel are unified and modified, community support is encouraged/ developed and Part-Time Social Workers (PTSWs) are used between village homes and health centres to serve as link workers in providing maximum coverage of the most needy regardless of where they live (PTSWs come from the villages they serve or adjacent villages).

3. **Commencement :** The Project was initiated on 2nd December 1974.

4. **Sponsors :** The Project's sponsors are The Government of India, The Government of Maharashtra and CARE-Maharashtra.

5. **Introduction:** Maharashtra is the third largest State in India, in area and in population. Covering 308.000 sq.kms (118.717 sq. mts.), it is slightly larger in area than Italy and with a population (in April 1971) of 50,412,235, about the same as France. About 69% of the State's people live in rural areas and about 6% of them are tribal. In

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1973-74, at then-current prices, the per capita income in the State was estimated at Rs. 1074.6, or a little more than U.S. $ 100 or British £ 50 at today's prices (March 1976).

By contrast, the per capita income in the Project area has been estimated to be as low as Re. 0.72, or 8 U.S. cents per day. Male and female literacy are expected not to exceed 20% and 10%, respectively. A 1969 study disclosed that the diet of rural Maharashtrians, when measured by Indian Standards, was about one-third deficit in calories and about 20% excess in protein.

The assumption that the people of the Project area are less well off against most measures than the majority of Maharashtrians is buttressed by the single fact that the population is 88% tribal, but there are other influential factors.

The Primary Health Centre (PHC) at Kasa covers all the villages in Saiwan Tribal Development (TD) Block and all but 5 in the Kasa TD Block. The 9 villages have been purposefully selected as <u>additional</u> control villages for the implementation of immunization campaigns, only (5 villages), and for imparting nutrition and health education, only (4 villages). The remaining 70 villages have been stratified according to the percentage of the

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severe malnutrition of undersixes, divided into 5 groups of 14 villages each, from which 10 basic control and 5 villages for intensive studies have been selected.*

There are, then, 79 villages covered by the Project: 60 experimental (which includes the 5 for intensive studies), 10 basic controls and 9 additional controls. The revised population of the 79 villages on the base day (14 January 1975) was 74,605, of the 70 experimental and basic control villages, 63,725, and of the 60 experimental villages, 56,364. Kasa village is 126.5 kms (about 85 miles) north of Bombay Central (Railway Station).

A weight of 65% or below of the Harvard Standard for weight-for-age will be used to distinguish between severe and moderate malnutrition. An estimated 23% of the under-sixes are expected to be severely malnourished. Poverty, though the main cause of malnutrition is abetted by ignorance and the relative isolation of the people.

Difficult terrain, inadequate transport and communications, the specialization of medical and paramedical personnel, insufficiently coordinated activities, traditions, as well as poverty and ignorance are prevailing factors which confine the impact of services to those living near health centre and to the relatively few more properous persons living farther away.

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* See Appendix I

The Kasa Model is based to a considerable extent on the "Domiciliary Treatment of Protein Calorie Malnutrition Project' in neighbouring Palghar Taluka, which was aided by the World Health Organisation. Dr. P.M. Shah, the Honorary Director (Tech) of the Kasa Project, served for 3 years as the Principal Investigator of the Palghar Project.

6. Methods :

6.1 Goals and objectives : The overall objective of the Kasa Project is to establish an administratively feasible, effective and economic model of integrated rural maternal-child health and nutrition services suitable for adoption by the Government of Maharashtra (GOM) throughout the State.

The following specific objectives are to be undertaken in the 60 experimental villages of the Project area. (See Appendix I for the sampling design).

6.1.1 To provide integrated maternal and child care for all children under six years of age and pregnant women and nursing mothers in each village by :

- Promoting adequate growth of children and curing existing moderate and severe malnutrition;

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(5)

- Identifying moderately and severely malnourished children; providing food supplements to those who weigh 65% or below of the Harvard Standard for weight-for-age; educating their parents in nutrition and child care;

- Providing food supplements and nutrition education to all primaepara women and for those who weigh less than 42 kgs at 34 weeks of pregnancy (food supplements will be given for the last 6 weeks of pregnancy and first 4 weeks of nursing);

- Imparting health, nutrition and child care education to the parents of all other children under six years of age;

- Immunizing all undersizes against smallpox, tuberculosis, tetanus, whooping cough and diphtheria;

- Inoculating all pregnant women with Tatanus toxoid;

- Providing special, intensified care for all "at-risk" children and women. One or more factors determine categorisation as "at risk" and in need of special care; (See Appendix II for the list of criteria used to classify beneficiaries as "at risk")

- Raising the health awareness of the entire community through health education.

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6.1.2 To bring health and nutritional care to villagers by training Part Time Social Workers (PTSWs) - hired from the same or neighbouring villages they serve - to - assist medical and paramedical personnel from the Primary Health Centre (PHC) and sub-centres, to distribute food supplements to eligible beneficiaries and to educate in nutrition and child care.

6.1.3 To promote village-level concern with the problems of malnutrition and their resolution through the active participation of village leaders, both formal and informal, by means of nutrition and health education through interpersonal contacts and by means of the demonstrated improvement of malnourished children through better dietary practices. The encourage - community involvement by specifically :

- Promoting milk contributions from within the community for severely malnourished infants when their mother's milk is not availab;e;
- Promoting community contributions of food for the severly malnourished who are economically needy;
- Promoting financial support for the Project within the Project area.

6.1.4 To make monthly evaluations of the progress of the Project in fulfilling its objectives.

6.1.5 To study :

- The effectiveness of the PTSWs;
- The cost/benefit ratio.

6.1.6 To perfect the model prior to duplication throughout the State.

6.2 Targets : The targets in relation to all undersix children and pregnant women and nursing mothers living in the 60 experimental villages are;

6.2.1 To reduce the infant, undersix and maternal mortality rates by 25%.

6.2.2 To reduce the incidence of malnutrition in children:

- Kwashiorkor, by 50%
- Severe malnutrition (60% and below of the Harvard Standard for weight for-age)by 50%; and
- Moderate malnutrition (61-70% of the Harvard Standard for weight-for-age) by 25%.

(In India the average weight of children in the age group 0-6 falls at 80% of the 50th percentile of the Harvard Standard for weight-for-age).

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6.2.3 To immunize :

. Smallpox 85%, of the unprotected children undersix estimated to be 10% of the total undersixes.

. BCG 60%, of total undersixes.

. DPT 50%, of total undersixes

6.2.4 To lower the existing birth rate by 20%.

6.2.5 To enhance the entire community's health and nutrition awareness level by 300%.

6.3 Evaluation : The efficiency and the effectiveness of the model is to be measured, using both single point status and longitudinal changes related to the goals and targets.

The specific indicators and the methods of evalution are:-

6.3.1 Indicators related to goals :

. Requisite administrative steps taken by Government of Maharashtra (GOM) in preparation for the adoption of the model Statewide,

. Actions taken by the GOM to extend model at Kasa,

. Quantum of community's milk contributions,

. Quantum of Community's other food contributions,

. Quantum of community's financial support for PTSW salaries,

. Adoption/adoption of model procedures in other areas of the State.

6.3.2 Indicators related to targets

. Point prevalence (class freqnency) of various degree of malnutrition of enrolled children;

. Maternal malnutrition (nutritional status of enrolled women) and average birth-weight of new-born infants;

. Proportions of the entire community in various degrees of malnutrition;

. Immunizational coverage of the community with special reference to children undersix against listed infactious diseasses;

. Infant mortality rate;

. Age-specific undersix mortality rate;

. Maternal mortality rate;

. Birth rate; and

. Level of health and nutrition awareness of the community.

6.4. Methods of Evaluation :

6.4.1 Indicators are to be studied in experimental and basic control villages in relation to bench-mark data on :

. Nutritional status, i.e., anthropometrical and clinical assessment;

. Immunizational status related to listed infectious diseases;

. Socio-economic status of families;

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, Level of health and nutrition awareness of beneficiaries and of the community as a whole in relation to the methods of imparting health and nutrition education;

. Mortality rates.

6.4.2 These surveys are to be repeated after an intervention period of one year.

6.4.3 Bi-monthly monitoring and fee-back are to be conducted through an in-built mechanism. At the end of the post-intervention evaluation surveys, absolute differences between the experimental villages, and the basic control villages, as well as relative differences of thos villagers in relation to their pre-intervention status are to studied.

6.4.4 There will be a monitoring unit connected with (but outside of) the Project, separately funded which will have as its specific objective to assess the external organizational and administrative inputs in relation to the transferability (or duplication) of the Project model Statewide.

6.5 Organization : At the state level, the Rural Development and Public Health departments of the Government of Maharashtra and CARE-Maharashtra are the implementing entities. CARE-Maharashtra is the administrating sponsor.

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As the administrating sponsor, CARE-Maharashtra will manage all Project funds, will see to implementation and will request the Government of Maharashtra to appoint an Honorary Project Director (Technical) and two coordinators, one to represent the Rural Development Department and another to represent Public Health.

6.6 Personnel : Personnel responsible for the implementation of the project and their respeonsibilities are briefly described below (All personnel are required to pay special attention to persons identified as "at risk")

6.6.1 PTSWs :

- Number : 28
- Background : PTSWs will preferably be nature woman with 6 to 8 years of primary school education.
- Responsibilities : At the village-level, they will be responsible fof carrying out Project activities such as the undertaking of a census, numbering houses, registering and weighing children and women and recording weights on charts, registering pregnant women, indentifying "at risk" children and women assisting in carrying out their treatment as prescribed by Project doctors, identifying degrees of malnutrition, distributing food supplements, conducting integrated clinics for pregnant women

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and children undersix, assisting Auxiliary Nurse Midwifes (ANMs) with immunizations, imparting maternal and child care education, and involving villagers in Project activities.

They will attend to all the undersixes and pregnant women and nursing mothers within an average population of about 2000 in an average of 2 villages.

In clinics held thrice a week, they will tend to the need of 20 to 25 women and children.

They will make 40 to 50 house visits during the course of a 5-day period, working for about 4 hours a day.

6.6.2 Auxiliary nurse-midwives (ANMs)

- Number : 8
- Background : Trained at ANM training schools after basic middle school education (8 years of schooling) In-charge of one of a sub-health centre (SHC) of the PHC at Kasa. Six ANMs work at sub-centres and two at the PHC, Kasa. Of the latter, one will be involved in the field activities and the other will help the medical officer at the PHC.

  Each SHC serves a population of about 10,000 from about 10 villages.

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- Responsibilities: They will supervise about 5 PTSWs, be responsible for Project activities in 10 villages covered by the SHC and visit each village at least once a fortnight.

  About 75% of an ANM's working time is expected to be spent on Project activities.

6.6.3 Male Multipurpose Workers :

- Number: 18 (1 Sanitary Inspector, 4 Smallpox Vaccinators, 13 Malaria Surveillance Workers).

- Background : Trained for the particular post at respective institutions.

- Responsibilities: They will supervise the work of PTSWs in difficult villages in which ANMs are handicapped.

6.6.4 Nurse Midwife (NM):

- Number : 1

- Background : Trained at a nursing college after basic high school education (11 years of schooling). In charge of the 6 SHCs within PHC area.

- Responsibilities: She will supervise the work of ANMs and PTSWs. Under the overall supervision of the District Tuberculosis Officer, she will organize immunization programs(with the help of ANMs). She will visit each sub-centre at least twice a month.

  She will spend 60% of her time on Project activities.

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6.6.5 Sanitary Inspector (SI) :

- Number : 1
- Background : Trained at the Sanitary Inspectors training Institute after experience as a vaccinator. 11 years basic schooling.
- Responsibilities : He will supervise the work of all Male Multipurpose workers and PTSWs. He will coordinate the various activities of PHC with Project activities. He will spend about 60% of his time on Project activities.

6.6.6 Medical Officers (MOs)

- Number : 2
- Background : Graduates (MBBS) from a medical college. Medical Officers of the Public Health Department; responsible for medical/health services of a PHC.
- Responsibilities : They will coordinate the Project activities. They will check on all "at risk" children and women. They will spend 60% of their time on Project activities.

6.6.7 Part-Time Research Fellow (Medical):

- Number : 1
- Background : Graduate of a medical college, with research experience.

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- Responsibilities : He will carry out both medical and research assignments. He will examine and treat "at-risk" under six children and women and others who are acutely or chronically ill. He will verify the list of "at-risk" persons, the causes of death,, the data of intensive morbidity studies, and will assist in surveys. He will visit the Project area three days a week and all villages once a month.

6.6.8. Field Research Officer (FRO).

- Number : 1
- Background : Graduate with research experience.
- Responsibilties : He will be responsible for research aspects of the Project: Organization of Surveys, extensive and intensive studies, data processing. He will prepare a manual for PTSWs and organize their training program. He will spend 100% of his time on Project activities.

6.6.9 Program Officer (PO):

- Number : 1
- Back Ground: Graduate with experience in program implementation and management.
- Responsibilities : He will be responsible for all Project programs. He will coordinate the activities between Project and PHC personnel. He will manage the work of all the PTSWs. He will maintain active contact with village communities. He will visit 15 villages a week. He will spend 100% of his time on Project activities.

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6.6.10 CARE Coordinators :

- Number : 2
- Background: Full time personnel of CARE-Maharashtra with field and/or research experience.
- Responsibilities : They will act as liaison between the (Hon) Project Director (Tech) and the Project Director (Administration). They will monitor the progress of Project activities, the work of the staff and help with the resolution of problems in the implementation of Project programs. They will oversee the preparation of proformas/tables/ reports, etc. They will purchase all equipment and material for use in the Project, except drugs and vaccine. They will travel, as necessary, to carry out their responsibilities.

6.6.11 Project Coordinator for the Rural Development Department:

- Number : 1
- Background : Project-cum-Block Development Officer, Dahanu.
- Responsibilities: He will check the possibilities of growing protein-rich foods with high calorie and fat content within Dhanu Taluka which could be acquired for Project use at a reasonable cost. He will coordinate with GOM and CARE on the development for "Food for work" projects within the Kasa PHC area, related to increasing agricultural production, which may

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become a source of donated foods for Project use. He will be responsible for encouraging the communities in the Project area to give milk and other contributions and to pay part or total salaries of PTSWs.

6.6.12 Project Coordinator for the Public Health Department:

- Number : 1
- Background : District Health Officer of Thana District.
- Responsibilities: He will coordinate with the Public Health Department. He will supervise the PHC staff; supply drugs and vaccines as sanctioned by the Government.

6.6.13 (Honorary) Project Director (Technical) :

- Number : 1
- Background : Professor of Pediatrics, Institute of Child Health, J.J. Group of Hospitals; Principal Investigator, WHO-Aided Palghar Project.
- Responsibilities : He will be in-charge of and direct all technical aspects of the Project. In cooperation with all other team members and coordinators of various departments he will plan, organize and implement all Project programs. Though regular field visits, he will supervise research activities, study problems and improvise

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methods, as necessary. He will conduct monthly review meetings with all the team members. He will report quarterly on the Project programs and problems to CARE-Maharashtra covering various aspects of planning, implementation and the evaluation of programs. He will develop an improvised health delivery system, including the concept of multi-purpose workers, in order to achieve a better utility rate of health services. He will organize various surveys including a census, training programms for team members, immunization campaigns, research studies and evaluations.

6.6.14 Project Director (Administration):

- Number : 1
- Background : Administrator, CARE-Maharashtra.
- Responsibilities : He will administrate the Project on behalf of the sponsors and will manage all Project funds except those of the Public Health Department. In coordination with the comcerned departments and with the (Hon) Project Director (Tech), he will see to the implementation of Project programs. He will approach the GOM for the appointment of the (Hon) Project Director (Tech) and of the coordinators representing the Rural Development and Public Health Departments. He will prepare project Progress Reports, at regular intervals, and reports and

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manuals, in consultation with the (Hon),Project Director (Tech.). He will see that all Project equipment and materials are procured in consultation with the (Hon) Project Director (Tech.).

6.7 Food Supplements: Severely malnourished undersixes and women and some classified as "at risk" for other reasons will receive food supplements.

The rations for children have been set at 30 gm of roasted groundnuts and 30 gm of roasted bengal grams (chick peas), and for women 40 gm of roasted groundnuts and 30 gm of roasted bengal grams. Fluctuation of commodity prices may affect rations.

Supplements will be distributed in 7-day quotas through weekly clinics by PTSWs or during hom visits.

6.8 Anticipated Problems :

Factors which may negatively affect the implementation of Project programs include :

- The suspension of the Special Nutrition Program in Tribal Development Block when Project activities are introduced;

- Difficult topography;

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- Poor communication;
- Resistance of people: 88% tribal, low literacy and income levels;
- The monsoon;
- A high turnover of Part-time Social Workers;
- Transfers of PHC personnel;
- The effectiveness of the education component;
- Untimely finance and procurement of materials and equipments.

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APPENDIX : I

A. Sampling Design

Total population.	:	63,725 *
No. of Villages	:	70

	Experimental	Basic control
Number of villages.	60	10
Population *	56,364	7,361
Estimated children, 0-6 years (18%)	10,146	1,325
Estimated pregnant women (1%)	564	74
Estimated No. of households at 5 members per household.	11,273	1,472
Estimated maximum possible no. of households having children 0-6	10,146	1,325
Estimated maximum possible no. of households having pregnant women.	564	74

(Basic control villages have been randomly selected)

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* Revised base-line census; base day: January 14, 1976

B. Villages for Detailed Studies

	Experimental	Basic Control	Additional Control
Number of villages.	5	5	9
Population *	3,681	3,680	10,880
Estimated children, 0-6 years.	663	663	1,958
Estimated pregnant women	37	37	109
Estimated no. of households, at 5 members per household	736	736	2,176

B. 1 Sample Size

Estimated children, 0-6 years (20%)	133	133	Sub Sample.
Estimated pregnant women (50%)	19	19	
Estimated no. of households (20%)	147	147	

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* Revised base-line census; base day: January 14, 1976.

APPENDIX : II

Indicators Used for Listing Undersixes and Women as "At Risk"

A. Undersixes :

If the child under six :

1. Weighs 65% of the reference (Harvard Standard for weight-for-age);
2. Fails to gain weight during 3 successive months;
3. Loses weight during 2 successive months
4. Has a weight of less than 1.5 kgs. at birth;
5. Develops acute episodes of illnesses such as measles or gastro-enteritis.

B. Women :

If a pregnant women :

1. Weighs 38 kgs or less before pregnancy; or
   Weighs 42 kgs or less at 34th week of pregancy; or
   Gains less than 1 kg a month after the 5th month of pregnancy;
2. Is less than 145 cms tall;
3. When she has her first baby, is below 18 or above 30 years old;

contd..

4. Is 35 years old or above;
5. Has a history of abortion or still-birth during a previous pregnancy;
6. During a previous pregnancy, lost her child within a month;
7. Had a previous delivery which was caesarean;
8. Is carrying her 5th or later child;
9. Has swollen legs;
10, Has a discharge
11. Has jaundice;
12. During her pregnancy there was concern about her having twins;
13. Has high blood pressure;
14. Had a child from a previous delivery which weighed less than 2 kgs. at birth.

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THE KASA MODEL

Integrated Mother-Child Health-Nutrition Project

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BRIEF NOTES ON :

1. Surveillance of Undersixes and Married Women

2. The "At Risk" Concept

3. The Vital Link: Part-Time Social Workers

4. Food Supplements

5. Immunization Campaigns

6. Family Planning

7. Training of ICDS Personnel

(Status as of March 31, 1976)

1. Surveillance of Undersixes And Married Women

A system for the effective surveillance of all undersixes, al married women including pregnant women and lactating mothers has been designed in such a way as to make possible rather complete coverage of these target groups through Project programs in all zones, no matter how remote or inaccessible, in which the position of the Part Time Social Workers is filled.

Surveillance in this sense means setting up a constant monitoring and feed-back system through which the medically a economically needy are first identified and then receive health and nutrition services where they live. Health and nutrition services have as components: treatment by medical and para-medical personnel, as necessary; the provision of free medicines, to those who cannot afford to pay for them; immunization against tetanus for women and against smallpox, diptheria, whooping cough, tetanus and tuberculosis for undersixes; family planning advice and services; the distribution of nutritional supplements; education in health, nutrition and child care; the maintenance of the correspondi records.

In fact small pox coverage is community-wide as are the encouragement of family planning and other aspects of the edicational componert.

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Following the base-line census, the identification of targetted beneficiaries was undertaken by Part Time Social Workers under the supervision of project, PHC and subcentre staff. Undersixes and women of child-bearing age were weighed, and undersixes and pregnant women whose weights in relation to standards set by the Project were too low, were listed as "at risk" and in need of special care. A child or women may be listed as "at risk" for other reasons than only low-weight.

The persons listed as "at risk" form the principal target group for most project programs. They are eligible to receive food supplements and special medical attention. PTSWs are to add and delete undersixes from the "at risk" list. Once a child has maintained for six weeks a weight which is above the standard set for weight-for-age, he is dropped from the list. The educational component is designed to minimize the recurrence of severe malnutrition. Women may receive food supplements during the last six weeks of pregnancy and first four weeks of nursing. Vitamins and iron-folic acid tablets are also be given to them.

PTSWs maintain simplified records. These include weight charts, in duplicate. The original copies are kept by pregnant women and by the mothers all children, not just the mothers of the severely malnourished. The weight chart fortifies verbal communication on good health and nutrition. Data collected by PTSWs help to identify early pregnancies. With

1691
NUT-100
COMMUNITY HEALTH CELL
326, V Main, I Block
Koramangala
Bangalore-560034
India

some frequency early detection has enabled pregnant women to opt for medical termination. PTSWs also have the responsibility of maintaining records on births and deaths.

The job descriptions and timetables of all PHC and sub-centre personnel have been revised so that ANMs and Smallpox - Vaccinators may serve as Multipurpose Workers. The distinction between medical and paramedical staff who originally had a heavy orientation towards family planning endeavours has been eliminated, and in this sense all PHC and subcentre staff have become multipurpose.

The Sanitary Inspector supports the Medical Officer in the day-by-day coordination with the Project's Program Officer.

2. The "At Risk" Concept.

Undersixes, pregnant women and nursing mothers are listed by Part Time Social Workers as "at risk" and in need of special care, or attention, for a variety of reasons.

A child under six years of age is listed as "at risk" if the child :-

1. Weighs 65% of the reference or less,
2. Fails to gain weight for three successive months,
3. Loses weight during two successive months,
4. Weighs less than 1.5 kgs at birth, or
5. Has an illness such as measles or acute severe gastro-enteritis.

So that perinatal deaths and the incidence of light-for-date births can be reduced, the "at risk" concept is extended to pregnant women.

Pregnant women are classified as "at risk", if one or more of the following factors apply :

1. Weighs 38 kgas or less before pregnancy; or
   Weighs 42 kgs or less at 34th week of pregnancy; or
   Gains less than 1 kg a month after the 5th month of pregnancy;
2. Is less than 145 cms. tall;
3. When she has her first baby, is below 18 or above 30 years old;
4. Is 35 years old or above at the time of pregnancy;
5. Has a history of abortion or still-birth during a previous pregnancy;
6. During a previous pregnancy, lost her child within a month,
7. Had a previous delivery which was caesarean;
8. Is carrying her 5th or later child;
9. Had swollen legs while pregnant;
10. Has a discharge while pregnant;
11. Has jaundice while pregnant;
12. During her pregnancy there was a doubt about her having twins;
13. Has high blood pressure;
14. Had a child from the previous delivery which weighed less than 2 kgs.

Although not all "at risk" persons receive food supplements, all should be kept under surveillance. When indicated, treatment is to be given by the PTSW or Supervisory staff to the "at risk" children and married women. The Supervisory staff, while visiting villages/hamlets must see "at risk" children and women and advise PTSWs on their management and refer and show these cases to the Medical Officers.

During periods of semi-starvation, which most normally would coincide with the seasons or times or greatestunder employmen our unemployment, the classification of whole families and, indeed, entire villages as "at risk" may be desirable.

The proper use of the "at risk" system depends on a constant, up-to-date flow of information on the nutritional status of undersixes, episodes of diarrhoea and measles, birth of light-for-date babies, as well as on the status of pregnant women.

3. The Vital Link : Part Time Social Workers (PTSWs)

The Part Time Social Worker (PTSW) is the link by means of which nutrition and health services reach villages where they live. The 60 experimental villages of the Project area are covered by 22 of these link workers. All but 5 of them (as of February 1976) were resident within the zones they served, and these 5 came from adjacent villages.

PTSWs may be male or female, married or single. of 25 workers in position as of 31 March, 6 were non-tribal females, 6 tribal females and 13 tribal males. Their average months of employment of PTSWs was 12.03. The average age of the 25 workers was about 22 years.

The drop-out rate was heavy following the kharif harvest - 9 resigned. Some PTSWs who resigned earlier have rejoined. A continual effort needs to be made to encourage a sense of social responsibility among PTSWs, particularly during those periods when full stomachs incline workers to rest. The turnover of male workers is greater than female. Ten of the 28 PTSWs have been with the Project since the beginning of the pre-implementation stage in December 1974.

Link workers are vital for the extension of health and nutrition services to village who live beyond the normal; or average, service area of a PHC or subcentre. Here are some observations on their utility in delivering these services to the village doorstep:

1. To the PTSW, his home and neighbouring villages are not inaccessible - even during the monsoon. "Inaccessibility" is a concept that is held and nourished by those who live and work in villages or areas which have relatively better communications.

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2. Because the PTSW does not consider his home area as inaccessible, some programs can continue to function at a high implementation rate even during the monsoon. For example the maximum possible implementation of the food-supplement program during the monsoon exceeded 80% in some zones containing so-called inaccessible villages.

4. The combination of good supervisors (Auxiliary Nurse Midwives and Smallpox Vaccinators, serving as Multipurpose Workers) and good PTSWs of course, brings better results, as the immunization and family planning campaigns have shown.

5. In bringing health and nutrition services to the most needy villagers, the first step is to identify them. This the PTSW can do after a little training. In the long run, the educational level of the link worker may not be so important as a willingness to learn, initiative and the stamina to cover the required distances (for example, the 79 Project and basic and additional control villages have 411 hamlets, often widely dispersed), although there is some indication that there is a positive correlation between the number of years of education of the PTSW and at least one immunization campaign result.

6. Once the pattern of delivery of health and nutrition services has been established, the turnover in PTSW positions is of less importance, because a degree of trust has been

established between villages and PHC and project staff and there is some understanding of Project programs, i.e., food is being delivered to the most needy in their villages. It is therefore easier for the replacement worker to start functioning well.

7. PTSWs helped to identify women who were eligible and wanted to undergo tubectomies. The health cards of married women, maintained by link workers, were an important tool in making these identifications.

8. Although male workers seem essential in difficult, remote zones (the Project area is 88% tribal), their turnover is higher than females (they have more job opportunities), and their ability to work directly and effectively with women is constricted. In theory, at least, they may seek the assistance of women, relatives or others, to overcome this handicap. In practice, however this is a slow procedure.

But male link workers have this compensatipn; those who stick to their jobs tend to establish good rapport with their communities and maintain better-than-average records. It may beconcluded that inspite of a relatively high turnover in PTSWs, and of the large number of male workers, that in time the turnover will lessen and that male workers will indeed be able to develop the means to work with married women even though indirectly.

It may also be concluded that it is the Part Time Social Worker, serving as the vital link between their home villages and PHC and Project personnel, who make the system work.

4. Food Supplements

Standards have been set by the Honorary Technical Director for inclusion of undersixes and women as nutrition programme beneficiaries. For children there is a weight-for-age criteria, and for pregnant women, varying weights at specific weeks of pregnancy.

The Harvard Standard for weight-for-age was chosen as the reference scale because the average weights-for-age of Indian children of economically well of families are more-or-less same as those of the Harvard Standard. In addition, the use of this standard facilitates international comparisons.

Undersixes weighing 65% of the standard or below, and belonging to economically needy families, receive food supplements until such time as they have reached a weight equal to or above 65% of the Standard and maintain that weight for six weeks. Food beneficiary lists are updated monthly by PTSWs. The 65% mark was established for reasons of economy; it has been observed that the number of children in the bracket of 65% to 70% of this standard is greater than all those whose weights are 65%

or below. Therefore, to include the children in the 66% to 70% bracket would be to double the cost of nutrition supplementation, which is - obviously - an important consideration when considering the implementation of large-scale programs.

Women who weigh 42 kgs or less at the 34th week of pregnancy also receive supplements during the remaining weeks of pregnancy and continuing through the first four weeks of nursing. This is the main criterian for including women in the nutrition program.

Locally purchased foods (at Bombay) are used as supplements: roasted Bengal grams and roasted groundnuts. The ratios for children were originally set at 30 gms of nuts and 20 gms. of grams, and for women 40 gms. and 30 gms. With the decline in wholesale prices, the rations were increased to 50 gms and 20 gms and 50 75 gms and 30 gms, respectively. Experience elsewhere in tribal areas of India tends to support our hypothesis that the parents of undersix beneficiaries indeed do view the rations as supplements and not as replacements for meals.

Groundnuts and Bengal grams are highly acceptable to beneficiaries, though this point may not be of paramount importance, if beneficiary selectionn is being properly carried out.

The groundnuts are roasted at Kasa, Supplements are packed in daily rations at the Project office in polythene bags purchased in Bombay. Bags made at Kasa from used newspapers were used,

experimentally, but were found to be too unsubstaintial for repetitious handling, even during the dry season. The minimun shelf live of supplements in polythene packets is about 8 weeks.

Deliveries are planned for each zone during the first fortnight of each month. PTSWs, in some villages with the help of members of the gram panchayat usually distribute the snacks to beneficiary homes, a week's supply at a time. In some villages/hamlets, the distributionof the snacks to children is undertaken, daily by respected community members.

Becuase the PTSW comes from the one of the villages she or he serves, or from an adjacent village, in a few instances, in relation to the implementation of the supplement program, the concept of a village being inaccessible does not exist, because for these link workers their villages are accessible. That is why food deliveries were made to all zones of the Project even during the monsoon, provided that the link-worker position was filled.

The total severely malnourished undersixes are estimated to be 23% of the total undersixes. Even while excluding 8 villages of 3 zones in which the PTSW position was vacant 81.85% of the estimated severely malnourished have been identified. Food distributions to PTSWs were sufficient to feed 63.18% of the severely malnourished undersixes, 91 days of the quarter, January to March 1976, in all villages except the 8 villages of the 3 zones in which there was no PTSW.

In April (all 30 days), deliveries increased so that the feeding potential of severely malnourished children rose to 98.92% in all zones covered by PTSWs. Eight villages in 3 sones were not covered.

With such a high level of istribution to zones, a new problem has arisen: storage facilities. A solution to the problem is being sought by observing traditional storage methods, selecting the most pucca of the practices with the aim of strengthening the container with local materials to increase their resistance to rats.

5. Immunization Campaigns

A part of the total package of health services to be delivered to program beneficiaries - where they live - is immunizational converage For undersixes, these immunizations, the targets set and actual coverage during the first two mass immunization compaigns are noted in the following table(s).

Comparison of Targets with Accomplishments of the 1st (22nd Nov. to 5th Dec. 1975) and 2nd (4th Feb. to 16th Feb. 1976) Immunization Campaigns Covering Undersixes:

Total undersixes in the villages where immunization campaigns were carried out (as of September 1975) : 8673.

Table 1 : Targets for Different Vaccinations

Vaccinations	Target	Number
Smallpox primary.	85% of unprotected children (anticipated to be 10% of the undersix population)	737
Smallpox Revaccination.	No fixed target	
1st DPT.	50%	4337
2nd DPT	50%	4337
BCG	60%	5204

Table 2 : Summary of Actual Coverage of Undersixes

Coverage.	Vaccinations				
	Triple antigen		BCG	Smallpox	
	1st	2nd		Primary	Revaccination
First Campaign	3947	*	3408	646	1100
Second Campaign	1767	2354	1860	274	641
Total	5714	2354	5268	920	1741
Percentage of undersixes covered.	65.9	27.1	60.7	*	*
Percentage of target covered	131.8	54.3	101.2	125.7	*

* Not applicable.

The District Tuberculosis Officer, Thana, supervised the overall operations of both campaigns, the achievements of which have been regarded as outstanding by epidemiologists, in view of the terrain of the project area, the sizeable tribal population (88%) and the scale of the operations.

A mop-up campaign has been set for the 10-day period beginning 3 May.

The coverage of mothers with tetanus toxoid was insignificant, due to multiple reasons, including the strong beliefs held by the community.

6. Family Planning

During the fiscal year, April 1974 - March- 1975, 45 sterilizations were performed within the Kasa PHC area.

During the fiscal year ending 31st March 1976, 750 operations were performed, which represents and increase over the previous year of 1567%.

The revised target for 1975-76 for the PHC, set in November 1975, was 630; the original had been 420. The revised target was exceeded by 19%.

The introduction of family planning as a scheduled activity in the Project area was timed to take place following the

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stabilization of the basic nutrition and health programs, which began in April 1975, and after the first mass immunization campaign. The good results of the first two immunization campaigns suggest that they were due to a considerable extent to the rapport between villagers and PHC, subcentre and Project staff that was developed through the implementation of other Project programs.

Family planning activities, timed in this way, it was hypothesize, would be more likely to be considered as one more of a variety of services offered through the PHC to help villagers improve their lives.

By the end of January, 250 sterilizations had been performed, most of them during the preceding 60 days. In February, the second immunization campaign took place, which on completion on 16th February 1976, permitted PHC and Project staff to start their drive to reach the revised target of 630 sterilizations. That the target was exceeded by 120 operations, is a significant testimonial to the hard-working Medical Officer. Normally, a PHC has two medical officers; at the Kasa PHC, there has been only one for the last 7 months.

The Medical Officer was greatly aided by his own cadre of personnel and by PTSWs who were able to motivate women to undergo tubectomies. In all, 27 tubectomies were performed by a visiting specialist, the Professor and Head of the

Department of Obstetrics and Gynaecology, Grant Medical College, Bombay. These were the first tubectomies ever performed within the PHC area.

Vital support for the campaign came from the government and local bodies such as the Panchayat Samithi and Jangle Kamgar Society who provided generous cash incentives.

Beginning in April 1976, family planning activities were resumed as a regular activity by PHC and Project personnel.

7. Training of ICDS Personnel :

The Central Government has recognised that the Integrated Child Development Services program has objectives, inputs and a plan of operations, similar to the Kasa MCHN Project. Now the Kasa MCHN Project is being used as a field training site by the GOI for various categories of ICDS implementing personnel, such as Anganwadi Workers, supervisors and child Development Program Officers (CDPOs)

The training programm consists, of lectures-cum discussions, demonstrations and excerises, case studies and village-level exposure to the working of Supervisors, PTSWs and MMPWs. The content ranges from clinical conditions and the etiology

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of malnutrition to monitoring, feed-back and program management. The training is conducted by people from different disciplines and backgrounds.

The date two batches of supervisors, one batch of CLPOs and one batch of Anganwadi Workers have been trained. On the 12th of May, a second batch of 16 CLPOs will begin training. Other batches are scheduled.

COMMUNITY HEALTH CELL
326, V Main, I Block
Koramangala
Bangalore-560034
India